

The Stewardship Series

NATURESCAPE

BRITISH COLUMBIA

Caring for Wildlife Habitat at Home

*Native Plant
and Animal
Booklet,
Southern
Interior
Mountains*



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NATURESCAPE
BRITISH COLUMBIA
Caring for wildlife habitat at home



NATURESCAPE BRITISH COLUMBIA

Native Plant and Animal Booklet, Southern Interior Mountains

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ABOUT NATURESCAPE BRITISH COLUMBIA

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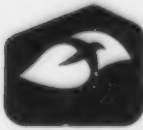
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TABLE OF CONTENTS

Introduction	2
Ecosystems and Ecosystem Diversity	2
<i>Ecosystems Defined</i>	2
<i>Diversity of Ecosystems</i>	3
<i>Climate</i>	3
<i>Topography</i>	4
<i>Disturbance</i>	4
How Ecosystems are Classified in British Columbia	5
The Southern Interior Mountains	6
<i>Location</i>	6
<i>Climate</i>	6
<i>Vegetation</i>	6
<i>Wildlife</i>	6
Special Forests and Trees in the Southern Interior Mountains	11
Putting It All Together In Your Yard	13
In Summary	14
Summary of Plant and Animal Tables, Southern Interior Mountains	15
Table 1: Native Plant	15
Table 2: Non-native Plants	24
Table 3: Butterflies and Moths	26
Table 4: Amphibians and Reptiles	31
Table 5: Birds	34
Table 6: Mammals	44



INTRODUCTION

The Provincial Guide has given you the basic how-to information for creating wildlife habitat in your yard. The next step is to consider the type of habitat appropriate to your location in the Southern Interior Mountains. What plants should you consider? What animals can you expect to attract?

To answer these questions, let's first venture into the surroundings beyond your home. Let us explore the concept of ecosystems and the physical area of the Southern Interior Mountains to take a look at where your property sits in the larger scheme of things. Then, we can return to your outdoor space and begin to answer your questions.

To get a better sense of our sustaining environment, we need a different perspective - one that looks beyond the neighbourhoods, shopping malls,

golf courses, highways and orchards. While it is still possible in British Columbia to look over the mountains and plateaus and see large expanses of natural ecosystems, the valley bottoms have been drastically changed, especially in the Southern Interior Mountains. Most of us live and work in the valley bottoms and much of the natural habitats here have given way to hydroelectric and housing developments. What did the landscape look like before dam construction? What species of plants and animals used to be found here? How did they live in their natural world? What was the natural community like where your house now sits?

Just as we define our neighbourhoods and communities, natural communities - wetlands, forests, and alpine meadows - can also define the natural world. One can think of these units of the natural landscape as nature's neighbourhoods. Essentially, you have two addresses - your urban address and your address within the natural environment of the Southern Interior Mountains.

This Native Plant and Animal Booklet explains the broader natural environment within which you live, and allows you to determine the general types of wildlife habitats you might consider when planning **Naturescape** projects. It includes a listing of plants and examples of their uses by wildlife and listings of wildlife species with notes on their natural history. A section on forests explains why dead and dying trees are important to wildlife and why cottonwood ecosystems are so important in the Southern Interior Mountains.

ECOSYSTEMS AND ECOSYSTEM DIVERSITY

Ecosystems Defined

An ecosystem is more of a concept than something specific. The term applies to any assemblage of living organisms and non-living elements, and their interaction with each other in both obvious and subtle ways.



Western White Trillium
JENNIFER WOODWARD

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You can think of an ecosystem as being any segment of the natural world that includes all the organisms and the environment within which they occur. The entire system must have a primary energy source, which is generally the sun. Plants use the sun's energy for their growth and, in turn, serve as food and shelter for animals. The cycle then continues with the animals. Their foraging activities may, for example, play a role in pollination, seed dispersal, or disturbing the plant community so that other species may become established.

The science of ecology, which studies the many relationships and processes in ecosystems, has only begun to scratch the surface in recognizing, describing and understanding all the processes that occur in different ecosystems. There is still much we don't know or fully understand.

Ecosystems can be defined at different scales from the very small to the very large. You can define ecosystems within ecosystems. For example, a decaying log in the forest, with its many plants and animals and associated non-living elements such as water, forms a small ecosystem within a much larger forest ecosystem.

Just as within a neighbourhood each person has an address, so within an ecosystem each organism has an address or habitat. Differences in habitat are quite clear: grassland animals such as Badgers, Western Meadowlarks and Lutescent Vireos do not live in the same neighbourhood as subalpine forest animals such as Mountain Caribou, Three-toed Woodpeckers or Astarte Fritillary. But animals not only live in different habitats; they have different foraging and life history strategies. You could think of these as their work addresses. Although these subalpine species (Mountain Caribou, Three-toed Woodpeckers, and Astarte Fritillary) share the same habitat, you would find them doing very different things.

Since every species has its own niche, or job, the loss of a species in any ecosystem has a ripple effect on the entire system. This is one of the many reasons why biodiversity is so important. On a larger scale, the loss of habitat diversity leads to a lessening of species diversity in our natural world.

SHARING YOUR OBSERVATIONS

As you create and nurture wildlife habitat on your property, you become one of the discoverers in the relatively young science of ecology. Your observations of relationships and processes, which happen within the wildlife habitat you provide and nurture, may be valuable to others.

Naturescape British Columbia encourages you to record your observations. Who knows what you might discover in this on-going adventure!

Diversity of Ecosystems

Ecosystems vary from one place to another due to factors such as climate, terrain, disturbance, soil type, and age; because British Columbia shows tremendous variation in all these components, it has an incredible diversity of ecosystems. In fact, this province is the most naturally diverse in all of Canada.

Climate

Like its ecosystems, the climate in British Columbia is very diverse. High mountains, deep valleys and westerly winds off the Pacific Ocean combine to produce some of the rainiest, snowiest, driest, hottest, coldest and windiest climates in Canada. Each winter the coast is inundated with the heaviest rainfalls in North America.

These weather systems generate heavy snowfalls as they pass over the Coast and Columbia mountains. In the lee of the Columbia Mountains distinctive rainshadows are created in places like the East Kootenay Trench and the Upper Fraser Valley from McBride to Valemount.

Temperatures along the open coast are moderated by the massive waters of the Pacific Ocean, rarely dropping below freezing in winter and rarely exceeding 25° C in summer. Sites east of the coast ranges are isolated from the moderating influence of the ocean and annual temperatures there can fluctuate widely. This is especially true in the north where long summer days can produce highs above 35° C and frigid Arctic fronts can bring winter temperatures down to -40° C or lower.



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DEVELOPMENT OF ECOSYSTEM DIVERSITY

An ecosystem will change over time, and each organism within the system has its own life cycle. Nothing remains static in nature. Different plant species succeed others in the development and evolution of a plant community, thus creating habitat for different wildlife species over time. For example, the structure, and plant and animal species composition of interior western redcedar/western hemlock forests are a result of the changes in climate and disturbance that have affected it during its development. In the Southern Interior Mountains, the most diverse ecosystems are in the valley bottoms.

Occasionally, cold Arctic air moves to our southern latitudes and brings with it subzero temperatures for days or weeks at a time.

Topography

The topography of an area - its mountains, valleys and plateaus - affects the diversity of ecosystems within that area. Species of plants and animals that are best adapted to the sheltered or leeward side of mountains may differ from those that thrive on the unsheltered or windward side. Furthermore, the slope of the terrain and exposure to the sun will limit the kinds of plants that can grow and the animals associated with them. If you look at a mountain valley, you see several vegetation and wildlife species, whereas the steep, rocky, upper slopes of the mountains on either side are often sparsely vegetated and contain different and fewer species.

Disturbance

The type, intensity and frequency of disturbance affect the relative evolution of an ecosystem. Natural disturbances, such as landslides, avalanches, fires, wind storms, disease and insect outbreaks change existing ecosystems locally and regionally.

The more frequent the disturbance, the less likely the ecosystem will be able to develop to the degree of complexity it could potentially exhibit. Mature plant communities that are fully developed are referred to

as 'climax communities'. For example, the annual disturbances on active avalanche slopes prevent the establishment of long-lived tree species and, as a result, prevent the establishment of a climax community.

The dry forests and grasslands of the East Kootenay Trench are influenced by fire. In the past, natural fires burned through these habitats every 4 to 50 years. Although small shrubs and trees usually perished, perennial bunchgrasses and large ponderosa pines and Douglas-firs survived, which resulted in an open, parkland forest. When fires are suppressed, young firs and pines survive and form a dense forest that is unlike the fire-maintained parkland.

Some types of disturbance are recurring, but their impact is relatively localized. High winds cause trees to fall over, creating various-sized openings in the forest, but in general do not significantly alter the forest. However, other types of disturbance may change the original ecosystem forever. For example, a wetland area filled in with boulders from a rockslide is not likely to return again to a wetland ecosystem.

Many disturbances are not natural. Probably, the most detrimental type of disturbance is urbanization. The process of urbanization permanently alters the landscape by removing areas of natural habitat and impeding plant and animal movements between remaining habitats. About 30% of any urbanized land surface is covered by pavement, and much of the remainder has buildings and other structures. Logging roads, ski-runs, mountain bike trails and off-road vehicles cause further erosion of natural habitats.

The introduction of non-native plant species has caused serious damage to interior ecosystems. Canada thistle, leafy spurge, knapweed and sulphur cinquefoil aggressively outcompete native plant species. Introduced wildlife such as European Starlings and House Sparrows has seriously affected native animal populations as well.

ECOPROVINCES, ECOREGIONS, AND ECOSECTIONS

British Columbia's 10 ecoprovinces are divided into 46 terrestrial and marine ecoregions, which are further subdivided into 116 ecosections.

How Ecosystems Are Classified in British Columbia

Scientists have developed a number of different ecosystem classification schemes over the years. Each scheme makes use of a combination of three main factors: climate, physiography, and vegetation.

One system used by the B.C. Ministry of Environment, Lands and Parks and other agencies involved in resource and environmental management is known as the Ecoregion System. This classification is based on the interaction between climatic processes, such as seasonal rainfall patterns, and physiography or topography.

The Ecoregion System divides the landscape into ecosystems at various spatial scales. Because the Naturescape program is ecologically based, it uses the 10 ecoprovinces that make up British Columbia.

- Ecoprovinces define areas with consistent climate, relief, and geological structures (e.g., the Southern Interior Mountains Ecoprovince).
- Ecoregions occur within ecoprovinces and cover areas with major physiographic and minor climatic variation (e.g., the Southern Columbia Mountains Ecoregion).
- Ecosections occur within ecoregions and define areas with minor physiographic and climatic variation (e.g., the Eastern Purcell Mountains Ecosection).

Ecoprovinces, ecoregions, and ecosections each describe, albeit at different scales, areas of similar climate, physiography, vegetation and wildlife potential.

Think of the Ecoregion System as a way of determining your address in the broader, natural community of the Southern Interior Mountains, beyond your neighbourhood and municipality. In this case, your address becomes one of the seven ecoregions, or ultimately 19 ecosections, within the Southern Interior Mountains Ecoprovince.

SOUTHERN INTERIOR MOUNTAINS ECOPROVINCE

COLUMBIA HIGHLANDS ECOREGION

Bowron Valley Ecosection
 Quennel Highland Ecosection
 Shuswap Highland Ecosection

NORTHERN COLUMBIA MOUNTAINS ECOREGION

Cariboo Mountains Ecosection
 Central Columbia Mountains Ecosection
 Eastern Purcell Mountains Ecosection
 McGillivray Range Ecosection

Northern Kootenay Mountains Ecosection
 Southern Columbia Mountains Ecosection

EASTERN CONTINENTAL RANGES ECOREGION

Front Ranges Ecosection

NORTHERN CONTINENTAL DIVIDE ECOREGION

Border Ranges Ecosection
 Crown of the Continent Ecosection

SELKIRK - BITTERROOT FOOTHILLS ECOREGION

Selkirk Foothills Ecosection

WESTERN CONTINENTAL RANGES ECOREGION

Central Park Ranges Ecosection
 Northern Park Ranges Ecosection
 Southern Park Ranges Ecosection

SOUTHERN ROCKY MOUNTAIN TRENCH ECOREGION

Big Bend Trench Ecosection
 East Kootenay Trench Ecosection

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Southern Columbia Mountains Ecosection

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Front Ranges Ecosection

NORTHERN CONTINENTAL DIVIDE ECOREGION

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Northern Park Ranges Ecosection
Southern Park Ranges Ecosection

SOUTHERN ROCKY MOUNTAIN TRENCH ECOREGION

Big Bend Trench Ecosection
East Kootenay Trench Ecosection

THE SOUTHERN INTERIOR MOUNTAINS ECOPROVINCE

Much of the information presented in this section has been taken from Dennis Demarchi's

An Introduction to the Ecoregions of British Columbia, published by the, Ministry of Environment, Lands and Parks, Victoria (1996).

Location

This ecoprovince is shared with Washington, Idaho, Montana and Alberta with about 50% of it occurring in B.C. It includes the southeastern part of the province, east of the Thompson-Okanagan plateaus. In British Columbia, the Southern Interior Mountains are bisected by the Southern Rocky Mountain Trench, which includes the East Kootenay, Big Bend, and Upper Fraser trenches. The Southern Rocky Mountains are east of this division. They are composed of the Eastern and Western Continental Ranges and the Northern Continental Divide ecoregions, which extend into southwestern Alberta. The Columbia Highlands, Northern Columbia Mountains and the Selkirk - Bitterroot Foothills ecoregions are located west of the Southern Rocky Mountain Trench. From north to south, some of the communities in the ecoprovince include McBride, Blue River, Golden, Revelstoke, Invermere, Sparwood, Kimberley, Cranbrook, Nelson, Castlegar, Trail and Creston.

Climate

The climate in the mountains is distinct from that in the Southern Rocky Mountain Trench. As moist air masses move from west to east, they lose their precipitation over the Columbia and Rocky Mountains. The western half of the ecoprovince is often referred to as the "Interior Wet Belt" because of its high levels of rain and snow. The trench lies in the "rain-shadow" of the Columbia Mountains and experiences a drier climate. During the summer, surface heating creates strong updrafts in the hills. The resulting downdraft over the centre of the East Kootenay Trench clears the skies and creates sunny conditions. Cold air masses sometimes move down the trench from the north, especially in winter.

Vegetation

The Southern Interior Mountains support a variety of forested ecosystems. In the north Columbia, Arrow, Kootenay, Slocan and lower Elk River valleys, western redcedar and western hemlock are the dominant trees. The drier forests are typified by an understorey of falsebox, black huckleberry, twinflower and queen's cup, whereas oval-leaved blueberry, devil's club, oak fern and five-leaved bramble are common in wetter stands. Forests in the West Kootenays have the highest tree species diversity in all of British Columbia.

Douglas-fir and ponderosa pine are abundant at low to mid-elevations in the East Kootenay Trench. Saskatoon, birch-leaved spirea, pinegrass and heart-leaved arnicas are expected species below their open canopy. The wetlands along the Columbia River support communities of cattail, bulrushes, pondweeds and pond-lilies. Forests above the upper Columbia and upper Elk river valleys usually have young forests of lodgepole pine and mature forests of hybrid white spruce and subalpine fir. Falsebox, false azalea, pinegrass and grouseberry cover the forest floor on these mid-mountain slopes.

Engelmann spruce and subalpine firs are characteristic trees at higher elevations throughout the region. The drier sites have black huckleberry and grouseberry in their understorey while white-flowered rhododendron and mountain arnicas are usually found in wetter areas. Alpine Tundra occurs on mountaintops, particularly in the Columbia and Rocky Mountains. The treeless meadows support species such as Arctic willow, nodding saxifrage, two-toned sedge, Sitka valerian and white mountain-heather.

Wildlife

The varied topography and climate of this ecoprovince have created diverse habitats used by many species of wildlife. The Southern Interior Mountains are ecologically linked with other ecoprovinces. The wet western redcedar/western hemlock forests are similar to those on the coast and provide habitat for birds frequently found further west (e.g., Chestnut-backed Chickadee).



Rocky Mountain Elk
JENNIFER WOODWARD

The upper Columbia and Creston valleys are important migration corridors for Tundra Swans, Canada Geese, and dabbling and diving ducks, particularly the Redhead. Greater White-fronted Geese migrate through the Creston Valley, especially in fall. Lower Arrow Lake Basin has habitat suitable for White-throated Swifts and Canyon Wrens, species more typical of the south Okanagan.

With over 350 kinds of birds, this ecoprovince supports 70% of the species known to occur in British Columbia and 62% of all of the breeding birds in the province. It has one of the highest breeding concentrations of Ospreys in the world. The Creston Valley has the only breeding site of Forster's Tern in British Columbia and is one of the few areas in the province where breeding Western Grebes may be found. Significant autumn and winter populations of waterbirds, especially American Coots, are found on large, ice-free lakes. The East Kootenay Trench is the centre of breeding abundance for the White-breasted Nuthatch. Large flocks of Clark's Nutcrackers appear in the valley bottoms during autumn and winter. Cavity-nesting birds such as Red-naped Sapsuckers and Red-breasted Nuthatches are abundant in the dry western redcedar/western hemlock forests along Lower Arrow Lake.

Mule Deer and White-tailed Deer are common and widely distributed in the ecoprovince. Mountain Goats are locally common. Rocky Mountain Elk are very abundant throughout the mountains and valleys adjacent to the East Kootenay Trench. Small populations of Mountain Caribou occur in old-growth Engelmann spruce forests in the Northern Park Ranges Ecoregion and the Columbia Mountains and Highlands Ecoregions. The most southern population of caribou in the province lives in the Kootenay Pass area. Grizzly and Black Bears are common throughout the region. Bighorn Sheep are common in the Southern Park Ranges Ecoregion and adjacent trench. There are also small, introduced populations of Bighorn Sheep in the West Kootenay, including Lower Arrow Lake.

Small mammals in the area include Long-eared Myotis, Pika, Yellow-bellied Marmot, Columbian and Golden-mantled Ground Squirrels, and Water Vole. Common reptiles are the Western Painted Turtle, Western Skink, and garter snake. Amphibians include Long-toed Salamander, Pacific Chorus Frog, Columbian Spotted Frog, and Western Toad. Over 400 species of moths have been identified in the West Kootenay.

This ecoprovince supports both anadromous and freshwater fish. Anadromous fish are those that live in saltwater but reproduce in fresh water. Our anadromous fish species include Chinook Salmon. Freshwater species include: Rainbow Trout (both native and introduced populations), Brook Trout (introduced), Bull Trout, Mountain Whitefish, Northern Squawfish, Slimy Sculpin and Yellowstone Cutthroat Trout.

Columbia Highlands Ecoregion

This ecoregion is found along the northwestern border of the ecoprovince. It is a rolling highland area that rises from plateaus and isolated ridges on the west and south to culminate in higher mountains along the northeastern margin. Moist Pacific air rising over these highlands brings intense precipitation. There are three ecosections in this ecoregion.

The Bowron Valley Ecosection is a moist, cold area, with a wide valley surrounded by low highlands to the west and rugged mountains to the east. It is centred on the community of Wells. This ecosection is unique among those west of the Southern Rocky Mountain Trench Ecoregion because it is the only one whose lower elevations are not dominated by western redcedar/western hemlock forests. Lodgepole pine, hybrid white spruce, and subalpine fir characterize the Bowron Valley Ecosection lowlands. Engelmann spruce is frequently found at the higher elevations.

The Quesnel Highland Ecosection is a highland area, intermediate between the plateaus to the west and the high, rugged mountains to the east. Precipitation is higher here than in the Shuswap Highland Ecosection to the south. Western redcedar and western hemlock stands are found at the lower elevations. Subalpine forests of Engelmann spruce and subalpine fir are found at higher elevations. Quesnel Lake is in the heart of this ecosection.

The Shuswap Highland Ecosection is a highland area, intermediate between the plateaus to the west and the mountains to the east. The climate here is warmer and winters are milder than the Quesnel Highland Ecosection to the north. Western redcedar

and western hemlock stands dominate the lower elevations and, near the mountain peaks, subalpine forests of Engelmann spruce and subalpine fir are dominant. Alpine tundra is not common in this ecosection. The Upper Adams Lake and most of Shuswap Lake are located in the Shuswap Highland Ecosection.

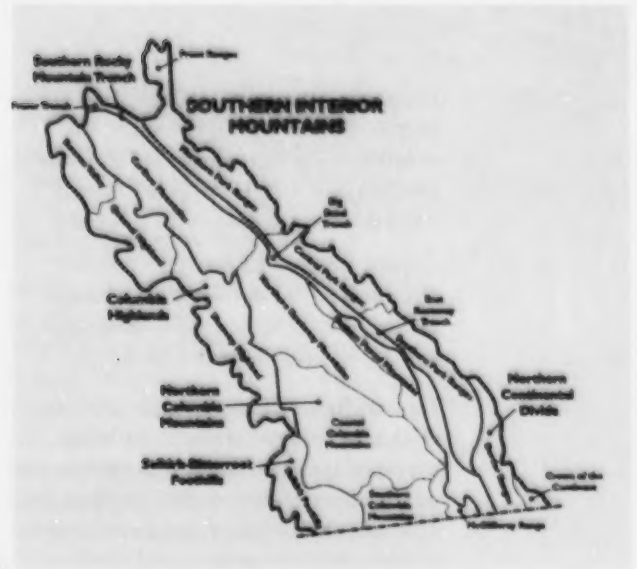
Northern Columbia Mountains Ecoregion

The Northern Columbia Mountains Ecoregion is a rugged, often ice-capped mountain area that rises abruptly from the Southern Rocky Mountain Trench to the east. This block of mountains intercepts eastward flowing precipitation, making these the wettest mountains in the interior of the province. This ecoregion contains six ecosections.

The Cariboo Mountains Ecosection is an area of high rugged, ice-capped mountains with narrow valleys. It lies at the north end of the ecoregion, west of the Upper Fraser Trench Ecosection. The dominant ecosystems here are the Engelmann spruce and subalpine fir forests and alpine tundra. The northern portion of Wells Gray Provincial Park and the eastern portion of Bowron Lake Provincial Park are focal points of this ecosection.

The Central Columbia Mountains Ecosection is an area of high ridges and mountains, but the valleys and trenches are relatively narrow. Precipitation is high from the valley bottoms to the upper slopes. Western redcedar/western hemlock forests grow in the valley bottoms, giving way to Engelmann spruce and subalpine fir and alpine tundra as one moves upslope. This Ecosection extends from just north of the west arm of Kootenay Lake in the south, along Trout Lake in the northeast and to Revelstoke in the north. It is bounded on the west by the Monashee Mountains and includes Upper Arrow Lake and Nakusp.

The Eastern Purcell Mountains Ecosection is a mountainous area with high valleys. It is located on the leeward side of the Purcell Ranges and is within their rainshadow. This ecosection extends from just north of Kimberley in the south, to Oldman Creek just west of Golden in the north.



The Southern Interior Ecoprovince

The 10 ecoprovinces of British Columbia

Its western boundary is the crest of the Purcell Mountains and its eastern boundary is the Rocky Mountain Trench. Most of the lower elevations have Douglas-fir and lodgepole pine that change to Engelmann spruce and subalpine fir stands at subalpine elevations. Here, alpine larch and whitebark pine are found near the treeline. The eastern portion of the Purcell Wilderness Conservancy and the Bugaboo Alpine Recreation Area lie within this ecosection.

The McGillivray Range Ecosection is a relatively dry area of subdued ridges located south of Kimberley and Cranbrook, east of Moyie Lake, and west of Lake Kootenai. About 10% of this ecosection extends into Montana. Douglas-fir is typical in the lower elevations and mid-elevations support lodgepole pine, hybrid white spruce and the occasional western redcedar/western hemlock stand. Engelmann spruce and subalpine fir grow at higher elevations.

The Northern Kootenay Mountains Ecosection is an area of high, rugged mountains, many of which are ice-capped. It has the highest precipitation and coldest temperatures in the Southern Interior Mountains Ecoprovince. This Ecosection extends from Duncan Lake in the south, to Blue River in the north, and includes Lake Revelstoke and the Beaver River valley. There are some enormous specimens of western redcedar in the wetter river valleys and mountain hemlock may be found in places like Mount Revelstoke and Glacier National Parks. Alpine tundra with extensive ice-fields is common.

The Southern Columbia Mountains Ecosection is an area of high ridges and mountains interspersed with wide valleys and trenches. It includes localities such as Nelson, Creston, Kingsgate and Moyie. Only about 40% of this ecosection is in Canada, the rest being located in Washington, Idaho and Montana.

Precipitation is high on the mountain slopes but the Creston Valley is in a strong rainshadow. The ecosystems range from wetlands and dry ponderosa pine/Douglas-fir forest in the Creston Valley, to montane forests and alpine tundra at Kootenay Pass.

Eastern Continental Ranges Ecoregion

This area lies on the east side of the southern Canadian Rocky Mountains and is represented by only one ecoregion in British Columbia.

The Front Ranges Ecoregion consists of parallel rows of ridges and valleys. Cold Arctic air often lies unimpeded over these mountains, bringing persistent cold temperatures which results in the Alpine Tundra Zone occurring at lower elevations than in the rest of the Southern Interior Mountains Ecoprovince.

This, the northernmost ecoregion, supports only subalpine forests, consisting mainly of Engelmann spruce and subalpine fir. The northeastern portion of Kakwa Provincial Park is in the southern portion of this ecoregion, which is located to the south of Tumbler Ridge.

Northern Continental Divide Ecoregion

The Northern Continental Divide Ecoregion is an area of wide valleys and rounded mountains interspersed with higher ridges of less erodable bedrock. Cold Arctic air from both the Southern Rocky Mountain Trench to the west and the Interior Plains to the east may influence this area. This ecoregion contains two ecoregions in British Columbia.

The Border Ranges Ecoregion is a mountainous area of wide valleys and subdued mountains, which only occasionally rise to steep, rugged ridges. It is located in the southeast part of the ecoprovince and includes Fernie, Elkford, and most of the Elk and Flathead river systems. This Ecoregion is divided among Montana (25%), Alberta (35%) and British Columbia (40%). Lodgepole pine and Douglas-fir are typical of lower elevations. Engelmann spruce/subalpine fir forests and alpine tundra occur at higher elevations.

The Crown of the Continent Ecoregion is a bold, mountainous area that rises abruptly from the surrounding plains, basins, and valleys. It is the southeastern-most ecoregion in the province and only a small portion of it is in British Columbia; the bulk of it lies in Montana and Alberta. Forests in this ecoregion are similar to those in the Border Ranges Ecoregion.

Selkirk - Bitterroot Foothills Ecoregion

Rounded mountains and wide valleys characterize this ecoregion, which lies between the warm moist highlands to the west and wet cool mountains to the east. In British Columbia, it is represented by only one ecoregion.

The Selkirk Foothills Ecoregion is a transitional mountain area between the rolling Okanagan Highlands to the west and the rugged portion of the Selkirk Mountains to the east. Salmo, Trail, Castlegar, Lower Arrow Lake and most of the Granby River are found here. About 50% of the ecoregion extends south into Washington and Idaho. As is typical in the West Kootenay, western redcedar/western hemlock forests cloak the lower elevations and Engelmann spruce and subalpine fir dominate the higher elevations. It is in this ecoregion that the greatest diversity of trees in British Columbia is found.

Western Continental Ranges Ecoregion

High, rugged mountains, usually with deep narrow valleys, and a continental climate characterize this area. It contains three ecoregions.

The Central Park Ranges Ecoregion is an area of high, rugged mountains, many of which are ice-capped; valleys are often short and steep-sided. The climate is cool and moderately dry. This Ecoregion straddles the Alberta/British Columbia border to the northeast of Kinbasket Lake. Western redcedar/western hemlock forests are found in the valley bottoms and Engelmann spruce/subalpine fir forests characterize the mid and higher elevations.

However, the most common ecosystem here is alpine tundra, which supports dwarf willows and sedges.

The Northern Park Ranges Ecoregion is an area of high, rugged mountains, with many ice-capped and moderately wide valleys. The climate is cool and moderately moist. Engelmann spruce/subalpine fir forests and alpine tundra predominate. This ecoregion is centred on Mount Robson Provincial Park.

The Southern Park Ranges Ecoregion is a rugged mountainous area, which is dissected by long rivers, forming moderately wide valleys. This ecoregion is centred on the Kootenay River and just creeps over the Alberta border. At low elevations, lodgepole pine dominates but Engelmann spruce and subalpine fir become abundant higher up. Much of the alpine tundra is covered with snow and ice, but white mountain-heather and sitka valerians are common plants in this ecosystem. Mount Assiniboine Provincial Park and Yoho and Kootenay National Parks are located in this ecoregion.

Southern Rocky Mountain Trench Ecoregion

This is a long wide, flat-bottomed valley that dissects the Southern Interior Mountains Ecoprovince. Cold Arctic air from the sub-boreal part of the province is able to move down the trench easily. In the summer months the southern part of the trench is the driest part of the ecoprovince. It contains three ecoregions.

The Big Bend Trench Ecoregion is the narrow section in the central part of the Rocky Mountain Trench. It is found between the Central Park Ranges Ecoregion and the North Columbia Mountains Ecoregion. Kinbasket Lake has flooded most of the lowland in this Ecoregion. This Ecoregion has high precipitation and primarily supports western redcedar/western hemlock forests.

The East Kootenay Trench Ecoregion is a broad, flat glacial plain with a distinctive rainshadow that lies in the southern portion of the Rocky Mountain Trench. Lake Kootenay, Cranbrook, Invermere and Golden are all found here. Less than 10% of the area

extends into Montana. It supports the most extensive area of grasslands and ponderosa pine forest in the Southern Interior Mountains. Its open rangelands and wetlands are some of the most important habitats in the province for wintering ungulates and waterfowl, respectively.

The Upper Fraser Trench Ecoregion is a broad, flat glacial plain in the northern portion of the Southern Rocky Mountain Trench. The summer climate is moderately moist and cool, but there is an increasingly distinct rainshadow from McBride to Valemount. In the winter, cold Arctic air can move into valley bottoms for extended periods of time. This lowland area is characterized by lodgepole pine and hybrid white spruce forests. The valley north of McBride is forested with western redcedar and western hemlock.

SPECIAL FORESTS AND TREES IN THE SOUTHERN INTERIOR MOUNTAINS

Wildlife Trees

There is life in dead and dying trees! A wildlife tree is any standing dead or live tree with special characteristics that provide valuable habitat for the conservation or enhancement of wildlife. These trees have special characteristics such as broken tops, loose bark and natural cavities. In British Columbia, more than 90 wildlife species depend on wildlife tree habitat for many of their life functions including reproduction, feeding, shelter, and communication.

The largest group of wildlife tree users is the cavity-nesting birds. Birds that excavate their own cavities (e.g., woodpeckers, nuthatches, and chickadees) are known as primary cavity excavators. Birds that use the abandoned cavities of the primary cavity excavators (e.g., small ducks, owls and birds of prey) are known as secondary cavity users. Wildlife tree-dependent mammals include most bats, some forest rodents, furbearers, bears, and caribou.

Many wildlife tree users play important ecological roles in forest ecosystems. Most notable is the significant impact that some of these species have on the abundance and distribution of forest insect pests.

Birds like woodpeckers, nuthatches, and chickadees consume large numbers of bark and woodboring beetles, budworms, tussock moths, and sawflies.

In addition to providing habitat for birds and mammals, wildlife trees represent essential habitat for insects, spiders, mosses, lichens, and mushrooms. Once fallen, these trees become coarse woody debris, habitat for a variety of species that inhabit the forest floor. Ultimately, wildlife trees become important suppliers of forest nutrients because as they decompose, wildlife trees return important nutrients (especially nitrogen) to the soils of the forest.

Despite its important ecological role, British Columbia's wildlife tree resource is declining. This decline seriously threatens the viability of many wildlife tree-dependent populations, to the extent that entire species may become endangered. Landowners can play a significant role in conserving this valuable resource. As long as they are safe, wildlife trees can be maintained on your private property. In general, the largest and tallest trees are the most valuable but wildlife trees of different ages, sizes and stages of decay provide habitat for different species of wildlife. Ponderosa pine, western larch, paper birch and trembling aspen are favourites of many species of cavity nesting birds. Mistletoe-infected trees provide a larval food source for the rare Thicket Hairstreak butterfly.

Riparian Cottonwood Forests

The word riparian refers to areas adjacent to streams, lakes and rivers that are wet enough to develop and support vegetation distinct from that of the surrounding uplands. One of the most common tree species found in riparian areas is the black cottonwood. This tree gets its name from the large number of tiny seeds that it produces, each with its own 'parachute' of white, cottony hairs. The riparian cottonwood understory usually consists of dense shrub thickets. The high productivity and rich diversity characteristic of cottonwood forests is partially the result of periodic flooding. Such flooding deposits fine soils, nutrients, and water in the forest. The B.C. Conservation Data Centre has ranked the cottonwood ecosystems of the southern interior among the rarest plant communities of the province.

These forests provide critical habitat for a wide range of dependent plant and animal species. In grassland ecosystems, cottonwoods may represent the only locally available wildlife tree resource. In the Southern Interior Mountains several species of endangered, threatened and vulnerable wildlife species are associated with riparian cottonwoods. These include the Yellow-breasted Chat, Lewis's Woodpecker, Western Screech-Owl and Rubber Boa. Intact cottonwood forests can connect one ecosystem to another and serve as travel corridors for many animals. Additionally, streamside cottonwoods provide an important food resource for fish, as insects fall from trees into the water.

Even though riparian cottonwood forests have a disproportionate importance relative to their area, they have been greatly impacted. Many of the cottonwood forests along the Kootenay River have been lost or impacted due to reservoir creation and drainage and channelization in the Creston Valley. Road building, housing development, cultivation, and grazing have also contributed to cottonwood habitat decline and modification.

Landowners living in or near riparian cottonwood stands can play an important role in their preservation. Controlling the access of cattle into riparian forests, finding alternatives to dyking and channeling, and preventing further clearing and cultivation can help maintain the few intact remaining cottonwood ecosystems. In particular, residents of the Kootenay and Columbia River valleys should be aware of their options. Fortunately, the high productivity of cottonwood ecosystems allows them to recover rapidly once the source of degradation has been removed. In fact, the "hand's-off" approach of letting this ecosystem recover on its own is highly effective.

PUTTING IT ALL TOGETHER IN YOUR YARD

You now have a general introduction to ecosystems and how they change. You also have a broad visual picture of the Southern Interior Mountains Ecoprovince and can look over the lists of native plants and animals found in the second half of this booklet. After finding the location of your home within an ecosection of the Southern Interior Mountains, spend some time exploring the natural, undisturbed areas nearby.

The type of wildlife habitat that will work in your outdoor space depends on a combination of factors: size and shape of your property, exposure to sun, and other elements, soil and moisture conditions, topography, and your specific location within the Southern Interior Mountains Ecoprovince. Everyone's outdoor space is different.

The size and shape of the outdoor space you have available may limit the extent of the wildlife habitat that can reasonably be developed. Apartment dwellers with balconies could focus on creating small flower gardens or hanging feeders to attract butterflies or hummingbirds. Townhouse patio yards may offer enough space to provide a few shrubs and small trees that produce berries or seeds attractive to birds. If your patio area is large enough, perhaps a small wildflower meadow or shrubby section of forest edge could be created.

Small yards have potential for some larger trees and more extensive forest edge or forest clearing habitat. Mud puddles can be created to attract butterflies like the Silvery Blue. A pond for amphibians could be considered. There may be room for small brush piles, rock piles and a flower garden for hummingbirds and butterflies. Larger properties may allow for the enhancement of existing woodland, stream, and pond habitats or the creation of large open meadows with shrubbery in dry areas, and small areas of wetland in the lower parts. If your property has wildlife trees, downed logs and stumps retain them if possible.

Nest boxes for birds, squirrels and bats are a valuable addition to any backyard. Most species will be more easily attracted if there are trees and shrubs in the yard for cover, perching sites, and foraging habitat. If the shape of your outdoor space is such that the wildlife habitat can be kept separate and undisturbed from human activities, you may have better luck attracting wildlife to your natural or supplementary nesting sites.

The amount of shade or sunlight your outdoor space receives is an important factor to consider in determining the type of habitat that you can successfully create. If your yard is shaded by adjacent buildings, mountains or forests, you may want to consider a shady forest floor habitat filled with shade-tolerant shrubs and ferns. If your property has full exposure to south - or west-facing sunlight, you may want to emphasize native grassland plants, sun-loving perennials and some of the flowering and fruit-bearing shrubs.

Soil conditions can be modified to some extent, but you will need to consider the basic condition of your soil when selecting plants. The needle fall in mixed and coniferous forests makes the soil acidic. In this case it makes sense to choose plants that are adapted to such soil conditions. Alternatively, many soils in dry grasslands can be alkaline or basic, and favour a completely different set of plant species.

Soil conditions and topography also have an effect on drainage conditions on your property. A well-drained, gravelly soil may be perfect for dryland species such as ponderosa pine or mallow ninebark, but inappropriate for plants adapted to moist, bottomland soils such as skunk cabbage.

The specific location of your home within the Southern Interior Mountains Ecoprovince will have considerable bearing on what plants can be successfully grown and what animals can be expected in your wildlife habitat.

Here is where time spent observing natural areas beyond your property will help most. By noting the types of habitat found in more natural parks and green belts, you will have a better idea of what habitat will work in your yard.

If you can hear the frogs singing in a natural area not far from your home, then you may have good success attracting various types of amphibians to a natural or artificial pond in your yard. If you live near a natural forested area containing deciduous and coniferous trees, various berry-producing shrubs and a number of different ferns, then you may consider creating a similar forest edge habitat in your yard. In this way, your wildlife habitat essentially forms an extension of the natural habitat nearby.

If you live within an area containing western redcedar/western hemlock forests of the interior wet-belt, you may want to consider creating that habitat in your yard. Again, take a close look at how the various mosses, grasses, flowers, shrubs and trees are arranged in more natural areas and then use that as a guide for your own wildlife habitat plans. If you have a large property, you may have the physical elements and room to allow for the creation of a small marsh or other wetland habitat. A close exploration and examination of natural wetland habitats would help you design your project.

It is important to keep in mind that the more you look at natural habitats, the more you will begin to see and understand them. The process of creating wildlife habitat is not a one time project. It becomes a continuous exchange between your efforts and the responses of the plants and wildlife. Your awareness and understanding of what will work in your outdoor space will grow with time and experience, as will your ability to enhance your habitat garden and make it even more attractive to wildlife.

As you learn more about the natural world, you will continually fine-tune your expertise. Some things may not work at first, but don't get discouraged. Try to determine reasons why the project isn't succeeding. The solution may be as simple as a slightly different sugar to water ratio in your

hummingbird feeder, or a different ratio of evergreen to deciduous trees and shrubs in your forest edge habitat. Always go back to the natural areas nearest your property to look for answers. Be patient and enjoy the learning process.

IN SUMMARY

When you look beyond your yard to focus on the broader natural environment within the Southern Interior Mountains, your address is no longer just a number on an urban street or a rural road, but also your location within the ecoprovince. You share this landscape with a natural community of plants and animals. Think about the impact of human activity on this community. Think about how you can reduce these impacts on your own land. Become educated about developments that will affect your community and get involved in the planning and decision making processes.

Since small patches of relatively undisturbed ecosystems within an urban expanse are not sustainable over the long term, promote the creation of wildlife corridors and protected natural areas. Larger patches of natural wildlife habitat can be restored, enhanced, maintained and protected over the years.

By caring for wildlife habitat at home, you begin the process of creating a patchwork quilt of natural habitat throughout your urban and rural landscape. Rather than a few scattered patches of green parkland in a grey urban expanse, the vision becomes patches of grey urbanization in a sea of green. Take pride! You are a pioneer in the naturalization of our urbanized areas and a steward for your home ecosystem - a guardian for the rich biodiversity of the Southern Interior Mountains.

SUMMARY OF PLANT AND ANIMAL TABLES, SOUTHERN INTERIOR MOUNTAINS

Table 1: Native Plants

Although the following list of native plants is extensive, it is by no means all inclusive. The list includes only those native species that we know to be currently available from commercial nurseries. More species will become available as the **Naturescape British Columbia** membership grows and people become more aware of the benefits of gardening with native species. Native plants should not be transplanted from the wild unless they are being salvaged from an area slated for destruction, e.g., through road-building or new housing. Cuttings, seeds or berries should never be taken from parks or other protected areas either. There is no sense in disturbing one natural area just to create another somewhere else. Furthermore, the success rate for nursery-raised native plants is much higher than for plants taken from the wild. If it is a plant that you are sincerely interested in trying to grow in your yard, consider collecting seeds and growing from seed.

When buying native plants from commercial sources, it is important to inquire about the nursery sources of the plants, to ensure that they are nursery propagated from seeds or cuttings, and not collected from the wild.

Since local growing conditions vary considerably throughout the Southern Interior Mountains, it is a good idea to discuss proposed plant purchases with the personnel at your local garden centre or retail nursery.

KEY

AVAILABILITY

-  available in specialty nurseries, some research may be required
-  available in most nurseries and garden centres

SUN EXPOSURE

-  adapted to full shade
-  adapted to a mix of sun and shade
-  adapted to full sun

MOISTURE PREFERENCE

-  adapted to dry, well-drained soils
-  needs some moisture
-  adapted to moist to wet soils



Fall Oregon Grape

 Table 1: Summary of Plant and Animal Tables, Southern Interior Mountains

Common Name	Scientific Name	Availability	Size	Moisture	Height	Description and Cultivation	Wildlife Habitat Value
Trees							
Grand fir <i>Abies grandis</i>			 	30 m	evergreen; smooth bark with resin blisters; becomes scaly with age; grows rapidly; suitable for West Kootenays.	Seeds eaten by Golden-mantled Ground Squirrels.	
Subalpine fir <i>Abies lasiocarpa</i>			 	35 m	evergreen; smooth, ash-grey bark with resin blisters; long, narrow crown; best in cooler climates.	Seeds eaten by Golden-mantled Ground Squirrels.	
Paper birch <i>Betula papyrifera</i>	 		 	Up to 40 m;	deciduous; white, papery bark; pointed leaves with toothed edges.	Provides browse for most ungulates; very important for cavity-nesting birds; larval food plant for butterflies.	
Western larch <i>Larix occidentalis</i>			 	40 m	deciduous conifer; most often found in mixed stands; prefers moist but well drained soils.	Large specimens are valuable wildlife trees; mistletoe-infected trees provide nest platforms and shelter for birds and mammals.	
Engelmann spruce <i>Picea engelmannii</i>			 	35 m	evergreen; scaly bark; narrow crown helps to shed snow; prefers deep, loamy soils.	Seeds eaten by crossbills and squirrels; Boreal Chickadees nest in their cavities.	
White spruce <i>Picea glauca</i>	 		 	35 m	evergreen; scaly bark; sharp, straight needles; grows under a variety of conditions but prefers moist, well-drained soils.	Provides winter cover for deer and moose; seeds eaten by squirrels and finches.	
Lodgepole pine <i>Pinus contorta</i>	 		 	20 m	evergreen; cones have prickles; twisted needles in bundles of 2; very hardy on a wide variety of sites.	Seeds eaten by Red Squirrels; larval food plant for Pine White butterfly; bark slabs on dead trees suitable for nesting Brown Creepers.	
Western white pine <i>Pinus monticola</i>			 	30 m	evergreen; long cones; needles in bundles of 5; mature bark breaks across into thick plates; highly susceptible to blister rust.	Seeds eaten by squirrels; bark slabs on wildlife trees suitable for nesting Brown Creepers.	
Ponderosa pine <i>Pinus ponderosa</i>				30 m	evergreen; mature bark forms jigsaw puzzle-like plates; needles are longest of the pines and in bundles of 5; appropriate for drier climates.	Seeds favoured by many birds and squirrels; an excellent wildlife tree.	
Black cottonwood <i>Populus balsamifera</i> spp. <i>trichocarpa</i>			  	40 m	deciduous; grey bark becomes furrowed with age; heart-shaped leaves; our fastest growing tree.	Twigs used by Moose; cavities used by bats, owls, Lewis's Woodpecker, and Vaux's Swifts; larval food plant for butterflies.	
Trembling aspen <i>Populus tremuloides</i>			 	30 m	deciduous; smooth, whitish bark; leaves 'tremble' in the wind due to flattened petioles; reproduces readily by suckering.	Probably the most important tree in British Columbia for nesting woodpeckers; larval food plant for butterflies.	
Douglas-fir <i>Pseudotsuga menziesii</i>	 		  	35 m	evergreen; bark is smooth when young but develops deep furrows with age; a hardy tree, well adapted to local climates.	Seeds provide food and branches provide shelter for a wide variety of wildlife.	
Western redcedar <i>Thuja plicata</i>	 		  	40 m	evergreen; scale-like leaves; can be useful for hedges or windbreaks; does best in moist areas with good drainage.	Mammals den in hollow trunks or logs; provides roost sites for Northern Saw-whet Owl; larval food plant for Cedar Hairstreak.	
Western hemlock <i>Tsuga heterophylla</i>			  	35 m	evergreen; drooped top is characteristic; shallow roots make it susceptible to windthrow.	Red-naped Sapsuckers excavate nest cavities in the trunks.	

Table 1: Summary of Plant and Animal Tables, Southern Interior Mountains

Common Name	Scientific Name	Availability	Spice	Moisture	Height	Description and Uses	Wildlife Interactions
SHRUBS AND SMALL TREES							
Douglas maple <i>Acer glabrum</i>	 		 	1-7 m	deciduous; opposite leaves in a typical maple-leaf shape; many pairs of winged seeds produced; prefers warm aspects.	Deer, Rocky Mountain Elk, Moose and Bighorn Sheep use it for browse; provides nesting sites for birds that build cup-nests.	
Sitka alder <i>Alnus crispa</i>			 	1-5 m	deciduous; oval leaves with toothed edges; tiny winged nutlets produced; fixes nitrogen.	Browsed by ungulates; squirrels eat seeds; birds eat buds and seeds.	
Mountain alder <i>Alnus tenuifolia</i>			  	2-10 m	oval leaves; inconspicuous flowers leave persistent cones; fixes nitrogen.	Seeds are readily consumed by squirrels and redpolls; provides nesting sites for birds.	
Saskatoon <i>Amelanchier alnifolia</i>	 			1-5 m	deciduous; white flowers; dark purple berries; many commercial varieties available; easily grown from root cuttings.	Twigs and leaves provide browse for ungulates; berries eaten by Golden-mantled Ground Squirrels and many birds.	
Scrub birch <i>Betula glandulosa</i>			  	30 - 200 cm	round, leathery leaves; cone-like fruits produce many seeds; can be grown from seed.	Seeds eaten by Pine Siskins and redpolls.	
Redstem ceanothus <i>Ceanothus sanguineus</i>				1-3 m	deciduous; oval leaves; fragrant flowers in dense clusters; fixes nitrogen.	Important browse for deer; larval food plant for California Tortoiseshell.	
Snowbrush <i>Ceanothus velutinus</i>				50 - 200 cm	oval, fragrant, evergreen leaves; tiny flowers in clusters; fixes nitrogen.	Important browse for deer.	
Red-osier dogwood <i>Cornus stolonifera</i>	 		 	1-4 m	bright red bark; white flowers and berries; opposite leaves and branches.	New shoots provide browse for deer. Rocky Mountain Elk and Moose; provides forage for larger rodents; many species of birds feed on the fruit.	
Beaked hazelnut <i>Corylus cornuta</i>			  	1-4 m	sharp-toothed leaves with pointed tips; clusters of 2-3 nuts each with a tubular beak; needs well-drained soils.	Nuts are highly prized by jays, squirrels and chipmunks.	
Red hawthorn <i>Crataegus columbiana</i>			 	3-5 m	white flowers; red berries; large thorns.	Dense leaves and branches make it attractive for bird nesting and roosting; berries eaten by a variety of birds and mammals.	
Silverberry (Wolf-willow) <i>Elaeagnus commutata</i>			 	1-4 m	silvery-grey leaves; small, yellow strongly scented flowers; looks like a small Russian olive; fixes nitrogen.	Berries provide food for birds and mammals.	
Ocean spray <i>Halodiscus discolor</i>				1-4 m	triangular leaves with coarse teeth; tiny, clustered, white flowers; persistent seed clusters; low maintenance.	Nectar source for hummingbirds.	
Common juniper <i>Juniperus communis</i>				50 - 100 cm	sharply pointed, evergreen leaves; cones resemble bluish berries.	Berries eaten by Townsend's Solitaires, Spotted Towhees and Red Squirrels.	
Rocky Mountain juniper <i>Juniperus scopulorum</i>				5-10 m	evergreen; scaly leaves; bluish cones resemble berries; seed coats must be dissolved before germination.	Berries eaten by birds; larval food plant for the rare Juniper Hairstreak.	

Table 1: Summary of Plant and Animal Tables, Southern Interior Mountains

Plant Characteristics				Wildlife Habitat Values		
Plant Name	Leaf Shape	Flower Shape	Fruit Shape	Height	Description	Wildlife Use
Black twinberry <i>Lonicera involucrata</i>				1-2 m	opposite leaves; yellow-tubular flowers; pairs of black berries subtended by purple bracts.	Berries eaten by birds; larval food plant of the rare Gillett's Checkerspot.
Utah honeysuckle <i>Lonicera utahensis</i>				0.5 - 2.0 m	opposite, oval leaves; creamy, trumpet-shaped flowers; partly fused pairs of bright red berries; easily propagated from cuttings.	Flowers provide nectar for hummingbirds.
Tall Oregon-grape <i>Mahonia aquifolium</i>				20 - 100 cm	evergreen, leathery leaflets with peripheral spines; the several yellow flowers yield blue berries; easy to grow.	Berries eaten by Black Bears.
False azalea <i>Menziesia ferruginea</i>				1-2 m	deciduous, elliptic leaves; bronzy, urn-shaped flowers; easily propagated from seed or cuttings.	
Devil's club <i>Oplopanax horridus</i>				1-3 m	large, plate-like leaves with spines underneath; spiny stems; pyramid-shaped clusters of bright red berries; propagation is slow.	Berries eaten by Black and Grizzly Bears.
Falsebox <i>Pachistima myrsinites</i>				30 - 60 cm	evergreen, oval leaves; inconspicuous flowers and fruits; susceptible to root rot.	Provides browse for deer and nesting cover for Dark-eyed Juncos.
Mock-orange <i>Philadelphus lewisii</i>				1-3 m	opposite, oval, deciduous leaves; large, fragrant white flowers; prefers well-drained sites.	Deer and Rocky Mountain Elk will browse its twigs.
Mallow ninebark <i>Physocarpus malvaceus</i>				1-2 m	lobed, deciduous leaves; small white flowers in rounded clusters; easily propagated from cuttings.	Provides roosting sites and cover for songbirds.
Shrubby cinquefoil <i>Potentilla fruticosa</i>				30 - 130 cm	divided leaves with silky hairs; bright yellow flowers; easily propagated from cuttings.	Occasionally used by browsing ungulates.
Pin cherry <i>Prunus pensylvanica</i>				1-5 m	lance-shaped deciduous leaves; bright red fruits in loose clusters.	Highly prized by birds so fruits seldom last long.
Choke cherry <i>Prunus virginiana</i>				1-4 m	oval leaves with toothed edges; clusters of red to black fruits hang like grapes; fruit stones contain cyanide.	Berries eaten by many species of birds; stems and leaves eaten by Mountain Goats.
Skunk currant <i>Ribes glandulosum</i>				50 - 100 cm	deciduous leaves are somewhat maple leaf-shaped; dark red berries are covered with glandular hairs; easily propagated from seed or cuttings.	Berries eaten by Columbian Ground Squirrels; provides nectar for hummingbirds.
Northern black currant <i>Ribes hudsonianum</i>				0.5-2 m	deciduous leaves are maple leaf-shaped; black berries; can be propagated from cuttings.	Berries eaten by birds and mammals.
Black gooseberry <i>Ribes lacustre</i>				1-2 m	deciduous; lobed leaves; hairy, dark purple berries; spiny stems.	Berries eaten by birds and Columbian Ground Squirrels.
Prickly rose <i>Rosa acicularis</i>				50 - 150cm	leaves with 5-7 leaflets; large, pink flowers; red fruits (hips); readily spreads by underground stems.	Hips eaten by Golden-mantled Ground Squirrels, bears, and coyotes.

Table 1: Summary of Plant and Animal Tables, Southern Interior Mountains

Plant Name	Native	Wildlife	Soil	Moisture	Height	Description and Use	Wildlife Habitat Value
Nootka rose <i>Rosa nutkana</i>					1-3 m	compound leaves with 5-7 leaflets; large, pink flowers; spreads by underground stems.	Leaves and twigs enjoyed by ungulates; hips eaten by chipmunks.
Prairie rose <i>Rosa woodsii</i>					1-2 m	leaves divided into 5-7 leaflets; pink flowers; can be grown from seed or root cuttings.	Hips eaten by Golden-mantled Ground Squirrels, bears, and coyotes.
Red raspberry <i>Rubus idaeus</i>					50 - 150 cm	5 pointed leaflets; white flowers; red berries; bristly stems or 'canes'	Berries relished by many songbirds and small mammals; deer and Snowshoe Hares feed on the stems and leaves.
Thimbleberry <i>Rubus parviflorus</i>					50 - 200 cm	maple-leaf shaped leaves; large, white flowers; red berries.	Berries eaten by birds and Golden-mantled Ground Squirrels.
Coyote willow <i>Salix exigua</i>					1-3 m	long, narrow leaves; flowers appear with leaves; an excellent riverbank species.	Twigs and leaves browsed by ungulates. Larval food plant for Dreamy Duskywing.
Sitka willow <i>Salix sitchensis</i>					1-8 m	elliptic leaves; silky fruits (capsules); readily resprouts after cutting.	Twigs and leaves browsed by ungulates. Larval food plant for Dreamy Duskywing.
Scopolallie <i>Shepherdia canadensis</i>					1-2 m	opposite leaves with tiny scales; tiny, unisexual flowers produce bright, red berries; fixes nitrogen.	Larval food plant for California Silkworm.
Western mountain-ash <i>Sorbus scopulina</i>					1-5 m	fern-like leaves made of 9-13 pointed leaflets; orange berries; unsuitable for the East Kootenay Trench.	Berries readily consumed by waxwings and robins.
Sitka mountain-ash <i>Sorbus sitchensis</i>					1-4 m	fern-like leaves made of 7-11 rounded leaflets; orange berries; grows better in wetter climates.	Berries readily consumed by waxwings and robins.
Pyramid spirea <i>Spiraea pyramidalis</i>					50 - 100 cm	deciduous; oval leaves with teeth above the middle; pink flowers in pyramid-shaped clusters.	Larval food plant for Spring Azure.
Common snowberry <i>Symphoricarpos albus</i>					50 - 150 cm	opposite, oval leaves; white, waxy berries; spreads by rhizomes.	Birds eat the berries; deer browse on twigs; larval food plant for Snowberry and Bumblebee Sphinx Moths
Western yew <i>Taxus brevifolia</i>					2-15 m	evergreen, needle leaves; fleshy, red fruits unlike typical evergreen cones.	Berry-like cones eaten by many birds.
Black huckleberry <i>Vaccinium membranaceum</i>					50 - 150 cm	elliptic, deciduous leaves; pinkish flowers appear with or after leaves; dark purple or black berries.	Berries eaten by many birds and are of high survival value for Black and Grizzly Bears.
Velvet-leaved blueberry <i>Vaccinium myrtilloides</i>					10 - 40 cm	elliptic, deciduous leaves are softly hairy; blue-grey berries.	Berries eaten by many birds and are of high survival value for Black and Grizzly Bears.
Oval-leaved blueberry <i>Vaccinium ovalifolium</i>					1-2 m	deciduous; um-shaped, pinkish flowers usually appear before the oval-shaped leaves; tasty, blue-black berries.	Berries eaten by many birds and are of high survival value for Black and Grizzly Bears.
High bush-cranberry <i>Viburnum edule</i>					0.5 - 2.5 m	opposite leaves with 3 lobes; white flowers yield red berries with flat stones; rhizome cuttings are easily propagated.	Small mammals and Bighorn Sheep eat berries; Moose and White-tailed Deer browse on twigs.

Table 1: Summary of Plant and Animal Tables, Southern Interior Mountains

Plant Characteristics				Wildlife Habitat Values		
Plant Name	Leaves	Flowers	Fruit	Height	Plant Description	Wildlife Use
Kinnikinnick <i>Arctostaphylos uva-ursi</i>				10 - 20 cm	mat-forming evergreen; smooth, shiny leaves; pink, urn-shaped flowers; mealy, red berries have large seeds.	Berries eaten by grouse, waxwings, and bears; twigs eaten by deer; larval food plant for Hoary Elf.
Bunchberry <i>Cornus canadensis</i>				5-20 cm	spreading, evergreen leaves in whorls; bright, red berries surrounded by large white bracts.	Berries and leaves are eaten by Ruffed Grouse.
Wild strawberry <i>Fragaria virginiana</i>				5-10 cm	leaves with three leaflets; white flowers produce conical, red berries.	Berries eaten by many species of wildlife, including turtles.
Twinflower <i>Linnaea borealis</i>				5 cm	trailing evergreen shrub; opposite leaves with pink, nodding flowers; easily propagated through layering.	
Shrubby penstemon <i>Penstemon fruticosus</i>				20 - 40 cm	somewhat evergreen shrub; tubular, purple flowers; easily propagated from cuttings.	
Five-leaved bramble <i>Rubus pedatus</i>				10 - 30 cm	trailing shrub; leaves divided into five leaflets; white flowers produce red fruits; easily propagated from rooted runners.	Berries eaten by small mammals and birds.
Trailing raspberry <i>Rubus pubescens</i>				10 - 30 cm	trailing shrub; diamond-shaped leaflets; white flowers produce red fruits; easily propagated from rooted runners.	Berries eaten by small mammals and birds.
Western white trillium <i>Trillium ovatum</i>				30 - 45 cm	three leaves in a whorl around stem; showy, white flowers; oil-rich seeds are dispersed by ants.	
Vines						
White clematis <i>Clematis ligusticifolia</i>				Up to 20 m long	opposite, pinnately compound leaves; white sepals but no petals; readily climbs on garden trellises.	Feathery seed plumes used in birds' nests.
Blue clematis <i>Clematis occidentalis</i>				Up to 5 m	opposite, divided leaves; large, purple sepals but lacks petals; easily propagated from seeds sown in the fall.	Feathery seed plumes used in birds' nests.
Orange honeysuckle (Western trumpet honeysuckle) <i>Lonicera alsea</i>				Up to 6 m	opposite leaves with the pair nearest branch tips fused together; tubular, orange flowers; easily propagated from cuttings.	Flowers provide nectar for butterflies and hummingbirds.
Perennials						
Yarrow <i>Achillea millefolium</i>				10 - 75 cm	flat-topped clusters of white to pink flowers, fern-like leaves; tolerant of disturbance.	Leaves eaten by Pikas; seeds eaten by Yellow Pine Chipmunks.
Nodding onion <i>Allium cernuum</i>				Up to 50 cm	grass-like leaves from a basal bulb; pink, bell-shaped flowers nod in a terminal cluster.	Nectar source for hummingbirds and butterflies.
Pearly everlasting <i>Anaphalis margaritacea</i>				20 - 90 cm	small, yellow, composite flowers surrounded by white, papery bracts; woolly leaves; tolerant of disturbance.	Leaves eaten by Pikas.

Common Name	Scientific Name	Appearance	Spill	Height	Location	Notes
Rosy pussytoes <i>Antennaria microphylla</i>				5 - 40 cm	mat-forming; flower bracts pinkish white.	Leaves eaten by Snowshoe Hares.
Red columbine <i>Aquilegia formosa</i>				70 - 100 cm	red and yellow flowers with nectar bearing spurs; long-stalked, divided leaves.	Nectar source for hummingbirds and butterflies; forage plant for Rocky Mountain Elk.
Pasture sage <i>Artemisia frigida</i>				10 - 40 cm	finely divided leaves; inconspicuous flowers; heavily scented; suitable in East Kootenay Trench.	
Goat's-beard <i>Aruncus dioicus</i>				1-2 m	large, divided leaves; many tiny, white flowers on elongated branches.	
Wild ginger <i>Asarum caudatum</i>				10 - 20 cm	evergreen, heart-shaped leaves; purplish-brown flowers have elongated sepals; easily propagated from rhizomes.	
Showy milkweed <i>Asclepias speciosa</i>				40 - 120 cm	opposite, egg-shaped leaves; elaborate flowers in umbrella-shaped clusters; milky sap.	Larval food plant for the rare Monarch butterfly.
Lindley's aster <i>Aster cilicollis</i>				20 - 100 cm	heart-shaped leaves with toothed edges; pale, blue flowers; blooms into autumn.	Larval food plant for Northern Pearl Crescent.
Showy aster <i>Aster conspicuus</i>				30 - 100 cm	egg-shaped leaves with toothed edges; many, purplish flowers.	Larval food plant for Northern Pearl Crescent.
Arrow-leaved balsamroot <i>Balsamorhiza sagittata</i>				20 - 80 cm	large, fleshy, arrow-shaped leaves; bright, yellow composite flowers.	Rocky Mountain Elk, deer and Bighorn Sheep graze on the leaves and flowers.
Common red paintbrush <i>Castilleja miniata</i>				30 - 60 cm	tubular, red flowers partly hidden by red-tipped bracts; partially parasitic on roots of nearby plants; difficult to grow.	Nectar source for hummingbirds; larval food plant of Anicia Checkerspot.
Queen's cup <i>Clintonia uniflora</i>				10 - 15 cm	elliptic leaves grow directly from base of plant; white flowers produce 'blue bead' berries; easily grown in gardens.	Berries eaten by Ruffed Grouse.
Upland larkspur <i>Delphinium nuttallianum</i>				15 - 40 cm	highly divided leaves; spurred, blue flowers; poisonous to humans and cattle.	Nectar source for butterflies.
Few-flowered shootingstar <i>Dodecatheon pulchellum</i>				5 - 40 cm	basal leaves; striking, pink flowers with reflexed petals; can be propagated from seed.	Occasionally used by grazing ungulates.
Fireweed <i>Epilobium angustifolium</i>				1-3 m	spikes of showy, pink-purple flowers; seed capsules release many seeds with fluffy 'parachutes'.	Nectar source for hummingbirds; foliage eaten by Golden-mantled Ground Squirrels; larval food plant for White-lined Sphinx.
Snow buckwheat <i>Eriogonum niveum</i>				10 - 40 cm	silvery-grey foliage; small, pink flowers; appropriate only in East Kootenay Trench.	Seeds eaten by chipmunks and mice.

Table 1: Summary of Plant and Animal Tables, Southern Interior Mountains

Brown-eyed susan <i>Gallardia aristata</i>				20 - 70 cm	narrow, felty leaves; large, yellow ray florets and purplish-brown, disk florets; easily grown from seed.	Butterfly nectar source.
Old man's whiskers <i>Geum triflorum</i>				20 - 40 cm	fern-like leaves; purplish petals and sepals; seeds with feather-like styles; appropriate in East Kootenay.	
Rattlesnake plantain <i>Goodyera oblongifolia</i>				20 - 40 cm	evergreen leaves with white stripes; several inconspicuous greenish-white flowers on spikes.	
Golden-aster <i>Heterotheca villosa</i>				10 - 50 cm	hairy leaves; large, yellow, composite flowers; appropriate for our dry climates.	
Cow-parsnip <i>Heracleum lanatum</i>				1-3 m	large, coarsely-toothed leaves divided into leaflets; large umbels of white flowers.	Larval food plant of Anise Swallowtail.
Round-leaved alumroot <i>Heuchera cylindrica</i>				15 - 90 cm	heart-shaped leaves grow from base of plant; yellowish flowers; appropriate for East Kootenay.	Nectar source for hummingbirds.
Tiger lily <i>Lilium columbianum</i>				50 - 90 cm	narrow leaves in whorls; showy, orange flowers with curled petals.	
Silky lupine <i>Lupinus sericeus</i>				20 - 60 cm	palmate leaves with silky hairs; deep blue, pea-like flowers; can be poisonous to animals.	Larval food plant for many butterflies including Persius Duskywing; seeds eaten by chipmunks.
Skunk cabbage <i>Lysichiton americanum</i>				30 - 150 cm	huge, basal leaves; large, yellow bract surrounds flower spike.	Leaves eaten by Black Bears.
Wild lily-of-the-valley <i>Maianthemum canadense</i>				5 - 25 cm	oval leaves grow from ground; small, white flowers produce small, red berries; readily spreads from creeping rhizomes.	
Silveryleaf phacelia <i>Phacelia hastata</i>				20 - 50 cm	silvery leaves; stamens extend beyond the purplish flowers; appropriate only in East Kootenay.	Occasionally grazed by Rocky Mountain Elk.
Showy Jacob's-ladder <i>Polemonium pulcherrimum</i>				5 - 35 cm	fern-like leaves; purple flowers in clusters; easily grown from seed.	
Prairie coneflower <i>Ratibida columnifera</i>				30 - 80 cm	long, pinnately divided leaves; brown 'cone' flowers with yellow, peripheral petals; easily grown from seed.	
False Solomon's-seal <i>Smilacina racemosa</i>				30 - 100 cm	elliptic leaves arranged on opposite sides of stem; small, white flower clusters yield red berries.	Berries eaten by Ruffed Grouse.
Star-flowered false Solomon's-seal <i>Smilacina stellata</i>				20 - 60 cm	lance-shaped leaves on opposite sides of stem; star-shaped flowers at ends of stems; easily propagated from rhizomes.	Leaves and stems eaten by Rocky Mountain Elk.
Canada goldenrod <i>Solidago canadensis</i>				30 - 150 cm	leafy stems; golden, pyramid-shaped flower clusters bloom into fall; adaptable to dry or moist areas.	Nectar source for butterflies; eaten by White-tailed Deer and Rocky Mountain Elk.

Clasping twistedstalk <i>Streptopus amplexifolius</i>				50 - 100 cm	elliptic leaves; greenish-white flowers; reddish-yellow, oval berries.	Berries eaten by Ruffed Grouse; grazed by Moose.
Rosy twistedstalk <i>Streptopus roseus</i>				15 - 30 cm	elliptic leaves; pinkish, bell-shaped flowers with whitish tips; red berries.	Berries a favourite with Grizzly Bears.
Canada violet <i>Viola canadensis</i>				10 - 40 cm	heart-shaped leaves; white flowers with purple lines; easily propagated from runners or sections of rhizomes.	
Stream violet <i>Viola glabella</i>				5-30 cm	heart-shaped leaves; yellow flowers with spurs.	Larval food plant for fritillaries.
Bluebunch wheatgrass <i>Elymus spicatus</i>				60 - 100 cm	clumped stems; florets sometimes have awns; found in our drier climates.	Excellent forage for deer, Bighorn Sheep and Mountain Goats.
Blue grama <i>Bouteloua gracilis</i>				20 - 50 cm	bunchgrass; flowers arranged in spikes that resemble eyelashes; appropriate only in East Kootenay.	Larval food plants for butterflies such as woodnymphs.
Idaho fescue <i>Festuca idahoensis</i>				30 - 90 cm	tufted; narrow, blue-green leaves; florets with awns.	Forage for ungulates; larval food plant for many species of butterflies including Common Branded Skipper.
June grass <i>Koeleria macrantha</i>				20 - 50 cm	grows in tufts; flowers in spikes at the ends of stems.	Provides spring forage for ungulates.
Giant wildrye <i>Leymus cinereus</i>				1-2 m	robust clumps with several stems; flat leaves.	Rocky Mountain Elk will eat it in winter; ground squirrels and chipmunks use seeds.
Needle-and-thread grass <i>Stipa comata</i>				30 - 60 cm	tufted; narrow leaves with rolled edges; long, curly awns.	Forage for ungulates; larval food plants for many species of butterflies.
Maidenhair fern <i>Adiantum pedatum</i>				40- 50 cm	palmately branched fronds with black stems; good for use in shade gardens.	Aboriginals noted that it is associated with Grizzly Bear habitat.
Lady fern <i>Athyrium filix-femina</i>				60 - 100 cm	large, spreading fronds; occurs from low to subalpine elevations; very cold hardy.	Fiddleheads and mature fronds are readily eaten by Black and Grizzly Bears; can provide winter food for ungulates.
Deer fern <i>Blechnum spicant</i>				20 - 80 cm	evergreen, leathery leaves; easily propagated from spores.	Food source for deer.
Fragile fern <i>Cystopteris fragilis</i>				30 cm	deciduous, delicate fronds; easily propagated from spores.	
Spiny wood fern <i>Dryopteris expansa</i>				80 - 100 cm	fronds somewhat evergreen; easily grown in home gardens.	
Oak fern <i>Gymnocarpium dryopteris</i>				30 cm	deciduous, broadly triangular fronds; rhizomes are easily transplanted and do well in moist, shady gardens.	
Bracken fern <i>Pteridium aquilinum</i>				1-2 m	large, deciduous leaves; often invades disturbed areas	Food source for deer, Caribou, and Blue Grouse. May be poisonous.
Rocky Mountain woodsia <i>Woodsia scopulina</i>				40 cm	deciduous fronds from creeping rhizomes; in rocky places.	

Table 2: Non-native Plants

Most species of plants sold in commercial greenhouses are not native to the Southern Interior Mountains Ecoprovince, British Columbia, and often, North America. Although wildlife will often use and benefit from non-native plants, we encourage homeowners to plant native species. In many cases, wildlife is using the non-native species simply because there are no native species available. It's time to break away from traditional thinking - it's okay if your shrubs don't flower every year or your lawn consists of perennial bunchgrasses that turn brown in the heat of the summer. Greenhouses are capable of growing many species of native plants that are currently unavailable. Successful businesses respond to consumer demands and, as more and more people realize the benefits of creating urban habitat, the variety and availability of native plants will grow.

Non-native species can diversify your choices until greenhouses can supply you with desired native species. Consider these few species as temporary candidates.

Tree		Wildlife Habitat Value		
Colorado spruce <i>Picea pungens</i>			20-30 m; bluish-green needles; large cones.	Dense foliage provides roost sites for birds; seeds eaten by crossbills.
Cherry <i>Prunus</i> spp.			4-6 m; prefers well-drained, moist soils.	Fruits a favourite with birds.
Mountain-ash <i>Sorbus</i> spp.			4-10 m; leaves divided into several smaller leaflets; clusters of orangey berries.	Fruits consumed by waxwings and thrushes.
Yew <i>Taxus</i> spp.			5-10 m; evergreen needles; red, fleshy 'berries' surround seeds.	Waxwings and Townsend's Solitaires eat 'berries'.
Shrub				
Butterfly-bush <i>Buddleia davidii</i>			1-2 m; deciduous leaves; purplish-white flower clusters.	Flowers attract butterflies and hummingbirds.
Cotoneaster <i>Cotoneaster</i> spp.			1-3 m; leaves mostly deciduous; drought tolerant.	Berries eaten by birds.
Honeysuckle <i>Lonicera tatarica</i>			2-3 m; opposite leaves; flowers and fruit red.	Hummingbirds and insects attracted to flowers.
Golden currant <i>Ribes aureum</i>			1-2 m; leaves with 3 lobes; small red flowers, tipped with yellow.	Berries eaten by birds and small mammals; flowers can provide nectar for hummingbirds.
Blackberry, Raspberry <i>Rubus</i> spp.			1-2 m; spiny stems and branches; deciduous leaves.	Thickets provide hiding cover and fruits for small birds and mammals.
Thorny buffalo-berry <i>Shepherdia argentea</i>			1-5 m; silvery leaves; bright red berries; stout thorns; fixes nitrogen; both sexes needed to produce fruit.	Berries eaten by birds and mammals; provides prey caching sites for Northern Shrikes.
Lilac <i>Syringa</i> spp.			2-4 m; heart-shaped leaves; clusters of fragrant, lavender flowers.	A good butterfly nectar source.
Vine				
American bittersweet <i>Celastrus scandens</i>			Alternate leaves; small, purple flowers; orange-red berries.	Berries eaten by birds.
Honeysuckle <i>Lonicera</i> spp.			Opposite leaves; orange to red flowers; red berries.	Flowers attract hummingbirds and moths.

Name		Sun	Moisture	Description and Cultivation	Wildlife Habitat Value
Common	Scientific				
Virginia creeper	<i>Parthenocissus quinquefolia</i>			Leaves divided into oval leaflets; clusters of small, dark, purple berries.	Fruits eaten by birds; provides hiding cover.
Grape	<i>Vitis</i> spp.			Leaves alternate; many-seeded fruits vary from blue to green.	Provides food, cover, and nest sites for some small birds and mammals.
PERENNIALS					
Milkweed	<i>Asclepias tuberosa</i>			Elaborate, orange flowers in umbels.	Butterfly nectar source; may attract Monarch Butterflies to your yard.
Fuchsia	<i>Fuchsia</i> spp.			Tubular, red flowers.	Attracts hummingbirds.
Purple coneflower	<i>Echinacea purpurea</i>			Tiny florets in cone-shaped heads with showy petals at base.	Attracts bees and butterflies.
Sunflower	<i>Helianthus</i> spp.			Large, yellow flower heads.	Seeds relished by finches, sparrows, and blackbirds.
Sweet rocket	<i>Hesperis matronalis</i>			Showy, fragrant, purple flowers.	Larval food and nectar source for butterflies.
Liatris	<i>Liatris</i> spp.			Narrow leaves; purple flowers in spikes.	Attracts bees.
Evening primrose	<i>Oenothera missouriensis</i>			Large, yellow flowers on prostrate stems; drought tolerant.	Nectar attracts moths.
Penstemon	<i>Penstemon</i> spp.			Tubular flowers; drought tolerant.	Flowers attract hummingbirds.

Table 3: Butterflies and Moths

The butterflies and moths tabulated below are species likely to be encountered in the valley bottoms, where most people live. The butterfly list is much more comprehensive than the moth list. Four of the listed species are endangered or threatened and have been marked with an X. These species are of Provincial conservation concern and should be protected by ecological reserves. Wet meadow, marsh, and sphagnum bog habitats are rare in the Southern Interior Mountains and therefore, species dependent on such habitats are also rare. While not threatened or endangered provincially, nationally or globally, species dependent on wet meadows, marshes or sphagnum bogs are only partially protected by Provincial and Federal laws. Some of the species which reside in subalpine and alpine habitat are restricted globally. These subalpine and alpine species are protected by Provincial and National Parks and are only threatened by global warming.

Abundance

In the Southern Interior Mountains suburban growth, intensive grazing, and flooding by dams has disturbed many low elevation habitats. The abundance rating is for undisturbed habitat, not alienated lands. If one lives in a rural area with at least a one hectare lot and devotes at least half of the land to native vegetation, especially wild meadows and riparian vegetation one can help to ensure that these species continue to survive. On smaller lots adjacent neighbours could cooperate.

Uncommon	0-2	specimens/observation period
Common	10-20	specimens/observation period
Abundant	50+	specimens/observation period
Fluctuates	1-50+	specimens/observation period

Distribution

Unless otherwise noted, these species occur throughout the Southern Interior Mountains.

Species	Abundance	Native Plant	Plant Family	Native Plant	Native Plant Distribution	Flight Season
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Silverspotted Skipper <i>Epargyreus clarus</i>	Fluctuates	Locust Tree <i>Robinia pseudo-acacia</i>	Unknown	Disturbed	Late May - early Aug.
Northern Cloudy Skipper <i>Thorybes pylades</i>	Uncommon	Pea Family	Pea Family	Forest edge	Mid May - mid June
Dreamy Duskywing <i>Erynnis icelus</i>	Common	Willow	Pea Family	Forest edge	Early May - late June
Persius Duskywing <i>Erynnis persius</i>	Common	Native lupines <i>Lupinus</i> spp.	Pea Family	Forest edge	Early May - early July
Ganita Skipper <i>Oarisma ganita</i>	Fluctuates	Native grasses	Unknown	Dry meadow	Mid June - mid July
European Skipper <i>Thymelicus lineola</i> (Introduced)	Abundant	Timothy <i>Phleum pratense</i>	Unknown	Pasture, lawns	Early July - late Aug.
Common Branded Skipper <i>Hesperia comma</i>	Common	Fescue <i>Festuca</i> spp.	Sunflower family	Ridge tops, hill tops	Late July - early Sept.
Long Dash Skipper <i>Polites mystic</i>	Uncommon	Bluegrasses <i>Poa</i> spp.	Unknown	Wet meadow	Mid June - mid July
Woodland Skipper <i>Ochlodes sylvanoides</i>	Abundant	Native grasses	Cultivated composites (sunflower family)	Meadows, back yards	Mid July - mid Sept.
Roadside Skipper <i>Amblyscirtes vialis</i>	Uncommon	Native grasses	Unknown	Streams, wet meadows	Late May - late June

Table 3: Butterflies and Moths

Common Name	Scientific Name	Abundance	Food Plant	Adult Habitat	Flight Season
SWALLOWTAILS - Family Papilionidae					
Anise Swallowtail <i>Papilio zelicaon</i>	Uncommon	Parsley Family <i>Heracleum lanatum</i>	Sunflower family	Streams, wet meadows, gardens	Late May - mid July
Canadian Tiger Swallowtail <i>Papilio canadensis</i>	Common	Poplar, birch, willow, alder	Lilacs	Streams, aspen wood, East Kootenay, Columbia.	Early May - early July
Western Tiger Swallowtail <i>Papilio rutulus</i>	Common	Poplar, birch, willow, alder	Lilacs	Streams, poplar woods, West Kootenay.	Late May - late June
Pale Tiger Swallowtail <i>Papilio eurymedon</i>	Common	Buckbrush <i>Ceanothus</i> sp.	Lilacs	Dry south slopes	Mid May - mid June
WHITES, SULPHURS, MARBLES, & ORANGETIPS - Family Pieridae					
Pine White <i>Neophasia menapia</i>	Fluctuates	Pines <i>Pinus</i> spp.	Unknown	Pine woods; West Kootenay	August
Western White <i>Pontia occidentalis</i>	Fluctuates	Whitlow-grass <i>Draba</i> sp.	Mustard family	Dry meadows, pine woods	April - May; Aug. - Sept.
Cabbage White <i>Pieris rapae</i> (Introduced)	Abundant	Cultivated cabbages	Various	Gardens	May, July & Sept
Veined White <i>Pieris marginalis</i>	Uncommon	Mustard family	Unknown	Streams	Early May - mid June; mid July - mid Aug.
Large Marble <i>Euchloe ausonides</i>	Common/uncommon	Rockcress <i>Arabis</i> spp.	Mustard family	Dry meadows	Late May - early July
Sara's Orangetip <i>Anthocharis sara</i>	Uncommon	Rockcress <i>Arabis</i> spp.	Mustard family	Dry meadows, ridges	Late April - early June
Common Sulphur <i>Colias philodice</i>	Abundant	Native legumes	Various	Meadows, alfalfa fields	May, July, Sept.
Columbia Sulphur <i>Colias occidentalis columbiensis</i>	Common	Native legumes	Native legumes	Dry meadows	Late June - early Aug.
CUPIDS, HAIRSTREAKS, & BIRDS - Family Lycaenidae					
Purple Copper <i>Lycæna helloides</i>	Abundant	Wild sorrel <i>Rumex</i> sp.	Sweet-clover <i>Melilotus</i> spp.	Dry meadows	Late May - early July; early Aug. - early Sept.
Great Copper X <i>Lycæna dione</i>	Rare	Water smartweed <i>Polygonum amphibium</i>	Sweet-clover <i>Melilotus</i> spp.	Lake shore, Elizabeth Lake, endangered.	Mid July - early Aug.
Sylvan Hairstreak <i>Satyrium sylvium</i>	Uncommon	Willow <i>Salix</i> spp.	Sweet-clover <i>Melilotus</i> spp. Thyme <i>Thymus</i> sp.	Slow stream & lake edges	Late June - early Aug.
Hedgerow Hairstreak <i>Satyrium saepium</i>	Uncommon	Buckbrush <i>Ceanothus</i> sp.	Sweet-clover <i>Melilotus</i> spp.	Dry slopes	Late June - early Aug.
Thicket Hairstreak <i>Loranthomitora spinetorum</i>	Rare	Mistletoe <i>Arceuthobium</i> spp. on mature Douglas-fir and Ponderosa pine	Dandelion	Douglas-fir & ponderosa pine woods.	Mid May - mid June

 Table 3: Butterflies and Moths

Common Name	Scientific Name	Abundance	Food Plants	Adult Notes	Habitat/Distribution	Flight Season
Ceanothus, Hamamelidaceae & Rosaceae - Family Pieridae						
Cedar Hairstreak <i>Mitoura rosneri</i>	Uncommon	Western redcedar	Sunflower family	Western redcedar woods, West Kootenay, Columbia.	Mid May - mid June	
Juniper Hairstreak X <i>Mitoura siva</i>	Rare	Rocky Mountain juniper	Sunflower family	Juniper trees, East Kootenay, threatened.	Mid May - mid June	
Hoary Elfin <i>Incisalia palia</i>	Uncommon	Kinnikinnick	Sunflower family	Pine woods	Late April - late May	
Western Pine Elfin <i>Incisalia eryphon</i>	Common	Ponderosa & lodgepole pine	Sunflower family	Pine woods	Early May - early June	
Gray Hairstreak <i>Strymon melinus</i>	Common	Native legumes	Sweet-clover <i>Melilotus</i> spp. Thyme <i>Thymus</i> sp.	Meadows, gardens	Mid May - late June; mid July - early Sept.	
Western Tailed Blue <i>Everes amyntula</i>	Common	Native legumes	Native legumes	Moist meadow, forest edge	Mid May - mid June	
Spring Azure <i>Celasina ladon</i>	Common/ abundant	Rose Family <i>Spiraea</i> sp.	Unknown, mud puddles	Stream and meadow edges	Mid April - mid May	
Silvery Blue <i>Glaucopsyche lygdamus</i>	Common	Native lupines <i>Lupinus</i> spp.	Unknown, mud puddles	Meadows and pine woods	Late April - early June	
Idas Blue <i>Lycaeides idas</i>	Common	Native lupines <i>Lupinus</i> spp.	Sweet-clovers <i>Melilotus</i> spp.	Meadows and pine woods	Late June - early Aug.	
Greenish Blue <i>Plebejus saepiolus</i>	Uncommon	Clovers <i>Trifolium</i> spp.	Unknown	Meadows and forest edges	June	
Icaroides Blue <i>Icaricia icaroides</i>	Uncommon	Native lupines <i>Lupinus</i> spp.	Unknown	Meadows and pine woods	Late June - early Aug.	
Bursaria - Family Nymphalidae						
Leto Fritillary <i>Speyeria cybele leto</i>	Uncommon	Native violets <i>Viola</i> spp.	Sunflower family	Douglas-fir and pine woods	Mid July - late Aug.	
Zerene Fritillary <i>Speyeria zerene</i>	Common	Native violets <i>Viola</i> spp.	Sunflower family	Douglas-fir and pine woods, dry meadows	Mid July - late Aug.	
Whitehouse Fritillary X <i>Speyeria aphardite whitehousei</i>	Common	Native violets <i>Viola</i> spp.	Sunflower family	Dry meadows, East Kootenay, threatened.	Mid July - late Aug.	
Northern Pearl Crescent <i>Phyciodes coqytia</i>	Common	Asters <i>Aster</i> spp.	Sunflower family	Meadows, fields, stream edges	Mid June - mid July	
Mylitta Crescent <i>Phyciodes mylitta</i>	Common	Thistles <i>Cirsium</i> spp.	Sunflower family	Disturbed fields, roadsides	Mid May - mid June; mid Aug. - mid Sept.	
Anicia Checkerspot <i>Euphydryas anicia</i>	Fluctuates	Paintbrush <i>Castilleja</i> spp.	Sunflower family	Dry meadows	Late May - late June	
Gillett's Checkerspot X <i>Euphydryas gilletti</i>	Rare	Black Twinberry <i>Lonicera involucrata</i>	Sunflower family	Edges of streams, Flathead drainage, threatened.	July	
Satyr <i>Polygonia satyrus</i>	Uncommon/ common	Nettles <i>Urtica</i> sp.	Sunflower family	Near old barns, hibernates.	Mid April - early June; Mid Aug. - late Sept.	

Name Common Scientific	Abundance	Larval Food	Adult Nectar	Habitat Distribution	Flight Season
BRUSHFOOTS - FAMILY NYMPHALIDAE					
Green Comma <i>Polygonia faunus</i>	Uncommon	Willow, birch, alder, poplar	Sap sucking	Streams	Mid April - early June; mid Aug. - late Sept.
California Tortoiseshell <i>Nymphalis californica</i>	Fluctuates, migrant	Buckbrush <i>Ceanothus</i> sp.	Unknown	Various	Variable
Mourning Cloak <i>Nymphalis antiopa</i>	Common	Willow	Unknown	Stream edges	April - June; late July - Sept.
Milbert's Tortoiseshell <i>Aglais milberti</i>	Common	Nettles <i>Urtica</i> sp.	Sunflower family	Various	April - May and August - Sept.
Red Admiral <i>Vanessa atalanta</i>	Uncommon migrant	Nettles <i>Urtica</i> sp.	Sunflower family	Near old barns	April - May and Aug. - Sept.
Painted Lady <i>Vanessa cardui</i>	Fluctuates; migrant	Thistles <i>Cirsium</i> spp.	Thistles <i>Cirsium</i> spp.	Various	Variable
White Admiral <i>Limenitis arthemis</i>	Common	Poplars <i>Populus</i> sp.	Unknown	Stream and woods edges, Columbia	Late June - July
Lorquin's Admiral <i>Limenitis lorquini</i>	Common	Willow, birch, alder, poplar	Unknown	Stream and woods edges, Kootenay	Late June - July
WOODNYMPHS - FAMILY SATYRIDAE					
Common Ringlet <i>Coenonympha tullia</i>	Abundant	Native grasses	Sunflower family	Dry meadows	Mid May - late June; Aug.
Common Woodnymph <i>Ceryonis pegala</i>	Common	Native grasses	Sunflower family	Dry meadows	Mid July - late Aug.
Dark Woodnymph <i>Ceryonis oetus</i>	Common	Native grasses	Sunflower family	Dry meadows	Mid July - late Aug.
Common Alpine <i>Erebia epistodea</i>	Common	Native grasses	Sunflower family	Moist meadows	Late May - mid June
MONARCHS - FAMILY DANITAE					
Monarch <i>Danaus plexippus</i>	Rare migrant	Milkweeds <i>Asclepias</i> spp.	Milkweed; Sunflower family	Meadows, Kootenay	Late June - mid Aug.
HUMMINGBIRD & SPHINX MOTHS - FAMILY SPHINGIDAE					
White-lined Sphinx <i>Hyles lineata</i>	Common migrant	Fireweed <i>Epilobium angustifolium</i>	Sweet Rocket <i>Hesperis matronalis</i>	Meadows	Variable
Eyed Sphinx <i>Smerinthus cersyi</i>	Common	Willow, poplar	Unknown	Meadows, woods edges	Mid May - early July
Snowberry Sphinx <i>Sphinx vasshti</i>	Common	Snowberry <i>Symphoricarpos</i> spp.	Unknown	Forest edges	Mid May - late June
Poplar Sphinx <i>Pachysphinx modesta</i>	Common	Poplar <i>Populus</i> spp.	Unknown	Poplar groves	Late May - early July
Bumblebee Sphinx <i>Hemaris diffinis</i>	Common	Snowberry <i>Symphoricarpos</i> spp.	Lilacs	Old fields, stream edges	Late May - mid June

Table 3: Butterflies and Moths

Species (Common Name)	Abundance	Host Plant	Adult Notes	Habitat / Distribution	Flight Season
SILK MOTH - FAMILY SPHINGIDAE					
Polyphemus Moth <i>Antheraea polyphemus</i>	Common	Poplar, birch, willow, cherry	None	Stream edges	Mid May - early July
California Silkmoth <i>Hyalophora euryalis</i>	Uncommon	Soopolalie Shepherdia canadensis; willows Salix spp.	None	Stream edges	Late May - late June
TIGER MOTHS - FAMILY ARCTIIDAE					
The Woolly Bear <i>Spilosoma virginica</i>	Common	Many	Unknown	Meadows	Late May - late June
TENT CATERPILLAR MOTHS - FAMILY LIMACODIDAE					
Western Tent Caterpillar <i>Malacosoma californicum</i>	Fluctuates	Shrubs, deciduous trees	Unknown	Open areas	Late June - early Aug.



Lorquins Admiral
JENNIFER WOODWARD

IMPORTANT NOTE CONCERNING THE FOLLOWING PAGES

**THE PAGES WHICH FOLLOW HAVE BEEN FILMED
TWICE IN ORDER TO OBTAIN THE BEST
REPRODUCTIVE QUALITY**

**USERS SHOULD CONSULT ALL THE PAGES
REPRODUCED ON THE FICHE IN ORDER TO OBTAIN
A COMPLETE READING OF THE TEXT.**

REMARQUE IMPORTANTE CONCERNANT LES PAGES QUI SUIVENT

**LES PAGES SUIVANTES ONT ÉTÉ REPRODUITES EN
DOUBLE AFIN D'AMÉLIORER LA QUALITÉ DE
REPRODUCTION**

**LES UTILISATEURS DOIVENT CONSULTER TOUTES
LES PAGES REPRODUITES SUR LA FICHE AFIN
D'OBTENIR LA LECTURE DU TEXTE INTÉGRAL**

Table 4: Amphibians and Reptiles

DISTRIBUTION	
All:	generally occurs throughout the Southern Interior Mountains
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High:	occurs mainly at high elevations (>1000 m)
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ABUNDANCE	
Rare:	limited to very specific and rare habitat types
Uncommon:	not seen every day in appropriate season and habitat
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LIMITING FACTORS

Water may be a limiting factor for amphibians in the Southern Interior Mountains, especially in the dry areas of the East Kootenay Trench and in the West Kootenay near Castlegar and Trail. Toad and frog tadpoles, like the aquatic larvae of Long-toed Salamanders must complete their metamorphosis in water. This may be a race against time in the drier regions of the Southern Interior Mountains as shallow pools or ditches dry up through the summer. Without water, young amphibians become desiccated and die! You can help prevent this by monitoring, from late June onwards, water levels of any ponds or ditches on your property. If you see that the water source is drying out, add non-chlorinated water from a nearby water source. A pool constructed in a backyard can provide vitally important habitat for salamanders, frogs, and toads.

CREATING AMPHIBIAN HABITAT

The Naturescape Provincial Guide gives tips on creating a wildlife pond (pp. 28-31), but details for our regional amphibians are given below. Plants are vital habitat components for amphibians. Some compatible species that can be easily obtained and propagated include emergent sedges (*Carex* spp.), spike-rushes (*Eleocharis* spp.), and marsh marigolds (*Caltha* spp.). These species provide cover around the edges of ponds. Stands of common cattail (*Typha latifolia*), however, may become too large and thick, thus preventing people from appreciating their pond. If the pond is deep enough, pond-lilies (*Nuphar* spp.) can provide excellent cover and a splash of colour from their showy flowers. Water smartweed (*Polygonum amphibium*), with its pink, spike-like flowers, can also provide cover. Submergent species such as

Canada waterweed (*Elodea canadensis*), white water-crowfoot (*Ranunculus aquatilis*), common mare's-tail (*Hippuris vulgaris*), and various pondweeds (*Potamogeton* spp.) are also valuable. Sago pondweed (*P. pectinatus*) provides food for ducks in the fall and can be established by transplanting tubers. Submergent species provide cover and food for tadpoles. Larval Long-toed Salamanders are carnivorous and eat small aquatic insects and pond snails. These invertebrates may be introduced into the pond with water taken from a nearby marsh area. Do not transplant fish because it is illegal and they will prey on amphibians and eggs in the pond.

Reminder: Avoid handling any amphibian! They may have toxic skin secretions that are transferred to you and your hands. In turn, amphibians may absorb, through their skin, chemicals on your hands such as lotion or insect repellent that are harmful to them. Furthermore, amphibians are often in danger of desiccation and handling them increases their risk of drying out.

HOW TO IDENTIFY SOME THREATENED AND ENDANGERED SPECIES

RED LIST

The red list includes any indigenous species or subspecies (taxa) considered to be extirpated, endangered, or threatened in British Columbia. Extirpated taxa no longer exist in the wild in British Columbia, but do occur elsewhere. Endangered taxa are facing imminent extirpation or extinction. Threatened taxa are likely to become endangered if their limiting factors are not reversed. Red-listed taxa include those species that have been, or are being, evaluated for these designations.

BLUE LIST

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HOW SCIENTISTS CATEGORIZE THREATENED AND ENDANGERED SPECIES
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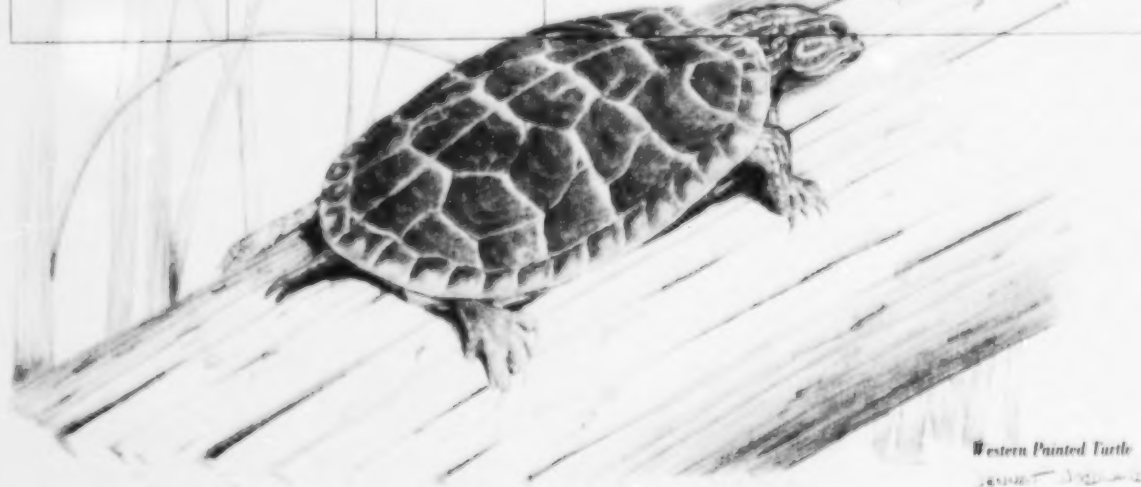
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 Table 4: Amphibians and Reptiles

Coeur d'Alene Salamander <i>Plethodon ichthoensis</i> (Red List)	Restricted - Southern Columbia Mountains; Low	Rare	Found in splash zones of waterfalls, rocky seepages, and in deep, moist talus; this specialized habitat is required to protect them from freezing and drying out.
Long-toed Salamander <i>Ambystoma macrodactylum</i>	Alt; Low	Common	In spring, they lay eggs in well-vegetated ponds; provide cover objects, such as large logs, near ponds.
Tailed Frog <i>Ascophus truei</i> (Blue List)	Restricted - Border Ranges; Low	Uncommon	Lives in and along cold, fast flowing streams; high water temperatures and siltation from logging have negative impacts on this species.
Pacific Chorus Frog <i>Pseudacris regilla</i> , formerly Pacific Tree Frog <i>Hyla regilla</i>	Alt; Low	Locally common	Breeds in a variety of shallow waters; outside the breeding season, they may be found in shrubbery and gardens; provide cover and moist retreats in the garden, especially in drier areas.
Columbian Spotted Frog <i>Rana luteiventris</i>	Alt; Low and High	Common	Recently declared a distinct species from the Red-listed Spotted Frog, <i>R. pretiosa</i> , which does not occur in the Southern Interior Mountains; breeds early in lakes, marshes, springs and beaver ponds.
Northern Leopard Frog <i>Rana pipiens</i> (Red List)	Restricted - Southern Columbia Mountains (Creston); formerly widespread in the East Kootenay Trench; Low.	Rare	Breeds in well-vegetated water bodies of all kinds; may forage well away from water in wet meadows.
Wood Frog <i>Rana sylvatica</i>	Restricted - North Columbia Mountains and Central Continental Ranges; Low	Locally common	Adults are very terrestrial in the non-breeding season; they may survive freezing temperatures and spend the winter in burrows, among roots and in crevices; utilizes woodland ponds and marshy lake margins for breeding.
Western Toad <i>Bufo boreas</i>	Alt; Low and High	Common	Often found away from water in moist forests; provide "toad houses" or small shelters in a moist, shady part of the garden.

Common Name	Scientific Name	Distribution	Abundance	Habitat, Behaviour, and How to Attract, Educate, or Protect the Species
REPTILES				
FRESHWATER TURTLES				
Western Painted Turtle <i>Chrysemys picta</i> (Blue List)		Restricted - southern half of the ecoprovince; Low	Common	Lays eggs in sand, soil and fine gravels near wetlands and warm, shallow lakes; protect identified nesting areas from physical disturbance; logs or floating platforms provide basking sites.
LIZARDS				
Western Skink <i>Eumeces skiltonianus</i>		Restricted - Southern Columbia Mountains, Selkirk Foothills; Low	Locally common	Not often seen; frequents open forests and tolerates moister conditions than many lizards; found in rotting logs, and under litter and large flat stones; females will guard their eggs; provide large stones and cover objects in forested areas.
Northern Alligator Lizard <i>Elgona coerulea</i>		Restricted - Southern Columbia Mountains, Selkirk Foothills; Low	Locally common	Found in a variety of habitats in open forests, near streams and around buildings; may bite when captured; tails break easily.
SNAKES				
Rubber boa <i>Charina bottae</i> (Blue List)		Restricted - East Kootenay Trench, Southern Columbia Mountains, Selkirk Foothills, Central Columbia Mountains; Low	Uncommon	Feeds on small rodents, lizards, salamanders and shrews; primarily nocturnal; requires wildlife trees and soil for burrowing; talus slopes and rock outcrops are used for hibernating, den sites and sunning habitat; avoid removing this rock for rip-rap or other purposes.
Western Terrestrial Garter Snake <i>Thamnophis elegans</i>		All; Low	Common	Usually lives near water at lower elevations; when handled, repulsive secretions are expelled from the vents of this and the next species.
Common Garter Snake <i>Thamnophis sirtalis</i>		All; Low	Common	Uses a variety of habitats; often forages along margins of wetlands and in the water; feeds on amphibians, fish, and small birds and mammals; garter snakes are extremely vulnerable to mortality on roads near waterbodies; construct drift fences and place flat sunning rocks in suitable locations to divert them from roads.



Western Painted Turtle

Table 5: Birds

With their bright colours, lively songs and daytime habits, birds are one of the most rewarding groups of wildlife to attract to your home. Read the **Naturescape** Provincial Guide for good information on how to attract birds. Here are some quick hints on how to attract birds to a Southern Interior Mountains backyard.

Provide a source of water for drinking and bathing; this is especially important in our dry areas such as the East Kootenay Trench. A small recirculating pump can be used to create a trickling waterfall that acts like a magnet for birds in hot weather. Most species of birds near your home will use a small bird bath. Bird baths can be as simple as a large dish or old garbage can lid set in the ground.

Plant berry-producing shrubs and trees such as mountain-ash, choke cherry, saskatoon and red-osier dogwood. Plant nectar-producing flowers, such as Utah honeysuckle, for hummingbirds.

Provide seeds for sparrows, finches, and other species. Small black sunflower seeds are perhaps the best all-round type, but millet and large striped sunflower seeds are popular as well. American Goldfinches and Pine Siskins prefer the small niger seed, while wheat kernels and cracked corn can provide winter food for Wild Turkeys and Ring-necked Pheasants.

Provide suet or a suet mix for woodpeckers, chickadees, nuthatches, jays, nutcrackers, and several other species. Suet can be hung in cake form in an onion bag or wire frame, or pushed into holes drilled into a hanging log. Use caution with your onion bags since woodpeckers can get caught in them.

The Kootenays have a large population of Ospreys partly due to the availability of nest sites. Nest platforms built of wire mesh and sticks can attract these magnificent fish-eating birds.

If you have a large yard, brush piles or areas of thick shrub will provide roosting and escape cover. Those that live at lakes could consider leaving their shores and shallows in a natural state to attract sandpipers, ducks, and kingfishers.

If you have cats, please keep them indoors if you can, or consider leashes. If not, place low wire fences around cover sites cats could use before pouncing. Forcing the cat to go over the fence gives the birds just enough time to escape. The effectiveness of single/double belling cats is variable. Always hang bird feeders where they are inaccessible to pets.

The following list of birds includes most of the species that can be encouraged to feed or nest near your home. Some species that require grasslands or marshes near farms or ranches are included as well.

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ABUNDANCE

Uncommon:	not seen every day in appropriate season and habitat
Common:	seen every day in appropriate season and habitat
Resident:	present year-round
Summer:	present only from spring through fall
Winter:	present only from fall through spring



Osprey
JENNIFER WOODWARD

Common Name	Scientific Name	Distribution	Abundance	Habitat, Breeding, and Other Notes
HERONS				
Large, long-legged water birds that feed on fish and other freshwater animals.				
Great Blue Heron <i>Ardea herodias</i> (Blue List)	All; Low	Uncommon resident	Forages for fish along wetland margins; sometimes eats field rodents; nests in colonies in large trees.	
SPEARING, GESE, AND DUCKS				
There are more than 35 species of waterfowl in the Southern Interior Mountains, largely due to the vast wetlands in the Creston and Columbia valleys. Many are rare or spring and fall transients.				
Canada Goose <i>Branta canadensis</i>	All; Low	Common resident	Uses a variety of wetlands; feeds in open areas; readily nests on platforms, beaver lodges or round-bales near wetlands.	
Wood Duck <i>Aix sponsa</i>	All; Low	Common summer	Nests in tree cavities adjacent to wetlands; uses nest boxes.	
Mallard <i>Anas platyrhynchos</i>	All; Low	Common resident	Uses a variety of wetlands; easily attracted to feed grains.	
Common Goldeneye <i>Bucephala clangula</i>	All; Low	Common resident	Uses a variety of wetlands; feeds on aquatic invertebrates; nests in tree cavities or nest boxes.	
Barrow's Goldeneye <i>Bucephala islandica</i>	All; Low	Uncommon resident	Uses a variety of wetlands; feeds on aquatic invertebrates; nests in tree cavities or nest boxes.	
Bufflehead <i>Bucephala albeola</i>	All; Low	Common summer, Uncommon winter	Uses a variety of wetlands; feeds on aquatic invertebrates; nests in tree cavities or nest boxes.	
Common Merganser <i>Mergus merganser</i>	All; Low	Common resident	Uses a variety of wetlands; feeds on aquatic invertebrates and fish; nests in tree cavities or nest boxes.	
OSPREY, HAWKS, AND FALCONS				
Sixteen species in the Southern Interior Mountains; most require natural areas larger than the average property. The species most likely to be seen around your home are those that feed on small birds and mammals (e.g., Sharp-shinned Hawk and American Kestrel). Their presence is an indication of how successful you have been at attracting their food sources.				
Osprey <i>Pandion haliaetus</i>	All; Low	Common summer	Shallow lake and river margins; builds large stick nests on wildlife trees or power poles; readily nests on artificial platforms.	
Red-tailed Hawk <i>Buteo jamaicensis</i>	All; Low	Uncommon resident	Soars over semi-forested areas and grasslands in search of small mammals for prey; maintain patches of large trees for nest sites.	
American Kestrel <i>Falco sparverius</i>	All; Low	Common summer, Uncommon winter	Forages in open country for large insects, small mammals and birds; nests in tree cavities and nest boxes.	

Table 5: Birds of the Southern Interior Mountains

Ground-nesting birds			
Eight species in the Southern Interior Mountains. All species are ground-nesters; many use thick coniferous trees for cover.			
Ring-necked Pheasant <i>Phasianus colchicus</i> (Introduced from Asia)	Restricted - West Kootenay; Low	Uncommon resident	Forages in agricultural habitats such as pastures and orchards; dense vegetation along watercourses is a favourite habitat; feeds on seeds and rose hips.
Ruffed Grouse <i>Bonasa umbellus</i>	Alt; Low	Common resident	Resides in woodlands, especially those with deciduous trees and abundant shrubs with nearby water; maintaining large tracts of this habitat should attract them.
Wild Turkey <i>Meleagris gallopavo</i> (Introduced from other parts of North America)	Restricted - West Kootenay; Low	Common resident (locally)	Lives in open woodlands and agricultural fields; forages on the ground for seeds, insects and ponderosa pine seeds.
Shorebirds			
A diverse group of birds, almost all of which are associated with wetlands. Most shorebirds use shallow mudflats for foraging; gulls scavenge along the water's edge or follow cultivators, catching insects and rodents. Most nest on the ground.			
Killdeer <i>Charadrius vociferus</i>	Alt; Low	Common summer	Forages in open fields, nests on the ground with sparse plant cover.
Spotted Sandpiper <i>Actitis macularia</i>	Alt; Low	Common summer	Found along shorelines; nests on ground nearby; uses a wide variety of aquatic habitats.
Common Snipe <i>Gallinago gallinago</i>	Alt; Low	Common summer; Uncommon winter	Forages and nests in meadows and marshes; winters in spring-fed seepage areas; does 'winnowing' courtship flights in spring.
Ring-billed Gull <i>Larus delawarensis</i>	Alt; low	Common summer; Uncommon winter	Forages in farm fields, ball diamonds and landfills.
Forster's Tern <i>Sterna forsteri</i> (Red List)	Restricted - Creston Valley; Low	Uncommon summer	Forages from the air and dives for fish; British Columbia's only nesting colony is at Duck Lake.
Black Tern <i>Chlidonias niger</i>	Alt; Low	Common summer	Forages for insects over wetlands; nests in marshes with emergent vegetation.
Owls			
Fourteen species of owls have been found in the Southern Interior Mountains, but some are no longer present (e.g., Burrowing Owl). Maintaining wildlife trees or supplying nest boxes will encourage nesting by many species.			
Flammulated Owl <i>Otus flammeolus</i> (Blue List)	Restricted - East Kootenay Trench; Low	Uncommon summer	Forages for insects in the forest canopy; nests in wildlife trees; will use nest boxes.
Great Horned Owl <i>Bubo virginianus</i>	Alt; Low	Uncommon resident	Hunts a variety of mammals including skunks and mice; forages in forest openings and grasslands; uses abandoned stick nests and wildlife trees for nesting.
Northern Hawk Owl <i>Sumia ulula</i>	Alt; High	Uncommon resident; seen mostly in winter	Lives in coniferous and mixed forests and hunts for rodents along edges and openings; nests in tree cavities.
Northern Pygmy Owl <i>Glaucidium gnoma</i>	Alt; Low	Uncommon resident; seen mostly in winter	Forages for small birds and rodents during the day, occasionally preys on feeder birds; nests in tree cavities and nest boxes.

Common Name	Scientific Name	Distribution	Abundance	Habitat, Behaviour, and How to Attract
Barred Owl	<i>Strix varia</i>	Alt; Low	Uncommon resident	Lives and hunts in a variety of forests; nests in larger wildlife trees.
Great Gray Owl	<i>Strix nebulosa</i>	Alt; Low	Uncommon resident; seen mostly in winter	Nests in the deep forest but hunts along forest edges and openings; nests in larger wildlife trees and abandoned stick nests.
Long-eared Owl	<i>Asio otus</i>	Alt; Low	Uncommon resident	Nests in abandoned stick nests in deciduous thickets; hunts for mice in open country.
Short-eared Owl	<i>Asio flammeus</i> (Blue List)	Alt; Low	Uncommon resident	Nests in open country with low vegetation; hunts at dusk over rangelands, farm fields and dykes.
Boreal Owl	<i>Aegolius funereus</i>	Alt; High	Uncommon resident	Forages for small mammals and birds in subalpine forest openings; nests in tree cavities and nest boxes.
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	Alt; Low	Uncommon resident	Forages for rodents in wooded areas; nests in wildlife trees and nest boxes.
SUNNY AND HUMMINGBIRDS				
Skillful fliers with tiny feet. Hummingbirds are easily attracted to feeders and flower gardens.				
Black Swift	<i>Cypseloides niger</i>	Alt; Low	Uncommon summer	Forages for insects in the air; nests on steep canyon walls near waterfalls.
Vaux's Swift	<i>Chaetura vauxi</i>	Alt; Low	Uncommon summer	Forages for insects in the air; nests and roosts in wildlife trees or chimneys.
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	Restricted - southern part of ecoprovince; Low	Uncommon summer	Frequents riparian woodlands, especially those with deciduous trees; feeds on insects and sap at sapsucker wells.
Calliope Hummingbird	<i>Stellula calliope</i>	Alt; Low	Uncommon summer	Forages in open woodlands and gardens for flower nectar; feeds on insects and sap at sapsucker wells.
Rufous Hummingbird	<i>Selasphorus rufus</i>	Alt; Low	Common summer	Forages in open woodlands and gardens for flower nectar; feeds on insects and sap at sapsucker wells.
KINGFISHERS				
Kingfishers nest in long burrows dug into the banks of roads and rivers.				
Belted Kingfisher	<i>Ceryle alcyon</i>	Alt; Low	Common summer; Uncommon winter	Hunts for small fish while hovering or perching over water; nests in burrows in banks.
WOODPECKERS				
Woodpeckers typically feed on insects in wildlife trees and are important for controlling forest pests (e.g., Mountain Pine Beetle). Woodpeckers can be attracted to yards with suet and suet mixes, especially if the suet is stuffed into holes in hanging logs.				
Lewis's Woodpecker	<i>Melanerpes lewis</i> (Blue List)	Alt; Low	Uncommon summer	Forages in open habitats catching flying insects in the air and eating fruit in orchards; nests in tree cavities.
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	Alt; Low	Common summer	Forages in mature forests and forest edges; drills rows of small, shallow holes in trees and returns to them to drink sap and pick insects; their cavities are used by many other species of wildlife.

 Table 5: Birds of the Southern Interior Mountains

Common Name Scientific	Distribution	Abundance	Habitat, Behaviour, and Breeding Attitude
Downy Woodpecker <i>Picoides pubescens</i>	Alt; Low	Common resident	Found in coniferous and mixed woodlands; readily attracted to suet feeders.
Hairy Woodpecker <i>Picoides villosus</i>	Alt; Low	Uncommon resident	Found in coniferous and mixed woodlands; readily attracted to suet feeders.
Three-toed Woodpecker <i>Picoides tridactylus</i>	Alt; Low and High	Uncommon resident	Forages on large spruce and wildlife trees; their cavities are used by Northern Flying Squirrels.
Black-backed Woodpecker <i>Picoides arcticus</i>	Alt; Low and High	Uncommon resident	Forages in insect-infested conifers and burned forests.
Northern Flicker <i>Colaptes auratus</i>	Alt; Low	Common resident	In summer, forages on the ground and on stumps in open woodlands for ants; their nest cavities are used by many other birds and mammals.
Pileated Woodpecker <i>Dryocopus pileatus</i>	Alt; Low	Uncommon resident	Forages for carpenter ants in wildlife trees; its cavities are used by other wildlife species as roost and nest sites.
FLYCATCHERS			
Migratory birds that typically catch insects by watching from a perch, darting out to catch the insect and returning to their perch. There are 12 regularly occurring species recorded in this ecoprovince.			
Olive-sided Flycatcher <i>Contopus cooperi</i>	Alt; High	Uncommon summer	Usually found on the edges of mature conifer forests, near water, over a wide range of elevations.
Western Wood-Pewee <i>Contopus sordidulus</i>	Alt; Low	Common summer	Frequents a variety of open forests, usually near water or on edges.
Willow Flycatcher <i>Empidonax traillii</i>	Alt; Low	Common summer	Found in deciduous thickets, especially near water; eats insects.
Hammond's Flycatcher <i>Empidonax hammondi</i>	Alt; Low	Common summer	Found in most types of coniferous forest where it forages for insects.
Western Kingbird <i>Tyrannus verticalis</i>	Restricted - southern half of the ecoprovince; Low	Uncommon summer	Frequently perches on power lines and in open habitats; often nests on power poles.
Eastern Kingbird <i>Tyrannus tyrannus</i>	Alt; Low	Common summer	Found in open areas and near deciduous woodlands, especially near water; nests in wildlife trees; feeds on insects and berries.
SWALLOWS			
Graceful fliers that forage for insects over water and other open areas.			
Tree Swallow <i>Tachycineta bicolor</i>	Alt; Low	Common summer	Found around water and open areas; nests in wildlife trees and nest boxes.
Violet-green Swallow <i>Tachycineta thalassina</i>	Alt; Low	Common summer	Found in open habitats where there are concentrations of flying insects; nests in nest boxes, wildlife trees, buildings and rock crevices.
Northern Rough-winged Swallow <i>Stelgidopteryx serripennis</i>	Alt; Low	Uncommon summer	Nests in burrows in banks.
Bank Swallow <i>Riparia riparia</i>	Alt; Low	Common summer	Nests in colonies in burrows dug in banks.

Name Common - Scientific	Distribution	Abundance	Habitat, Behaviour, and Feeding Adaptations
Cliff Swallow <i>Hirundo pyrrhonota</i>	Alt; Low	Common summer	Nests in colonies of ovoid mud nests plastered to cliffs, under the eaves of buildings or under bridges.
Barn Swallow <i>Hirundo rustica</i>	Alt; Low	Common summer	Nests in bowl-shaped, mud nests plastered under the eaves of buildings or under bridges; may use small nest platforms placed under the eaves of buildings.
CROWS, RAVENS AND JAYS			
Highly intelligent birds that are easily attracted to feeders with suet, seeds or peanuts. Most of these birds store food when it is available, as is the case with feeders, so they can clean out a feeder very quickly. Wire mesh will keep crows and jays out of feeders, and still allow access by smaller birds. Old crow nests are used by birds of prey for nesting and roosting.			
Gray Jay <i>Perisoreus canadensis</i>	Alt; High	Common resident	Lives in high mountain spruce/fir forests; comes to feeding stations and garbage cans in ski areas and campsites.
Steller's Jay <i>Cyanocitta stelleri</i>	Alt; Low and High	Common resident	Lives in a wide variety of coniferous and mixed-wood forest types; readily attracted to feeders.
Clark's Nutcracker <i>Nucifraga columbiana</i>	Alt; High in summer, Low in winter	Uncommon resident	Forages for pine nuts in ponderosa and whitebark pines; may come to suet feeders.
American Crow <i>Corvus brachyrhynchos</i>	Alt; Low	Common resident	Forages and nests in mixed woodlands, farmlands and urban areas.
Common Raven <i>Corvus corax</i>	Alt; Low and High	Common resident	Scavenges for carrion and garbage in a variety of forested and open habitats.
CHICKADEES			
Small, social birds that form small winter flocks with nuthatches and kinglets. Chickadees store food when they find it in abundance, such as at bird feeders. They prefer the smaller black oil sunflower seeds to the larger striped variety. Chickadees excavate their nest cavities in well-decayed wildlife trees but will use old nuthatch holes. They can be attracted to nest boxes.			
Black-capped Chickadee <i>Poecile atricapillus</i>	Alt; Low	Common resident	Forages in deciduous and mixed woodlands.
Mountain Chickadee <i>Poecile gambeli</i>	Alt; Low and High	Common resident	Forages in coniferous and mixed woodlands.
Boreal Chickadee <i>Poecile hudsonicus</i>	Alt; High	Common resident	Found in coniferous woodlands to the treeline.
Chestnut-backed Chickadee <i>Poecile rufescens</i>	Alt (but primarily in the West Kootenay); Low	Common resident	Found in coniferous forests in the wetter climates.
NUTHATCHES			
Nuthatches forage for insects, often by creeping down tree trunks. Nuthatches excavate their nest cavities in well decayed wildlife trees, especially those with broken tops. Suet and smaller black oil sunflower seeds will attract them to feeders. They will use nest boxes.			
Red-breasted Nuthatch <i>Sitta canadensis</i>	Alt; Low and High	Common resident	Found in coniferous and mixed woodlands; easily attracted to feeders.
White-breasted Nuthatch <i>sitta carolinensis</i>	Restricted - East Kootenay Trench; Low	Uncommon resident	Found in ponderosa pine and open Douglas-fir stands.

Table 5: Birds of the Southern Interior Mountains

Name	Distribution	Abundance	Habitat, Behaviour and How to Attract
CREEPERS			
Well-camouflaged birds that creep along tree trunks and branches, searching for insect prey.			
Brown Creeper <i>Certhia americana</i>	Alt; Low	Uncommon resident	Preferred nest sites are behind bark slabs on dead pine trees, but they will nest in bark crevices in large cedar trees; slabs can be cut into trees to provide nest sites.
WRENS			
Small, insectivorous birds with loud voices and pleasant songs. Some species build several "dummy" nests, but use only one.			
Winter Wren <i>Troglodytes troglodytes</i>	Alt; Low	Common resident	Nests in bark crevices or root wads from downed trees; occasionally uses nest boxes.
Marsh Wren <i>Cistothorus palustris</i>	Restricted - mostly found in southern half of the ecoprovince; Low	Common summer	Builds a spherical nest in emergent marsh vegetation.
DIPPERS			
American Dipper <i>Cinclus mexicanus</i>	Alt; Low	Common resident	Feeds and nests along stony river or stream banks; feeds by diving for aquatic insects and fish eggs.
KINGLETS AND THRUSHES			
Kinglets are tiny, active, forest birds that feed on insects. Thrushes are excellent songsters and some are well adapted to human activities.			
Golden-crowned Kinglet <i>Regulus satrapa</i>	Alt; Low and High	Common resident	Forages in a variety of coniferous and mixed forests.
Ruby-crowned Kinglet <i>Regulus calendula</i>	Alt; Low and High	Common summer	Forages in a variety of coniferous and mixed forests.
Mountain Bluebird <i>Sialia cucuoides</i>	Alt; Low and High	Common summer	Forages in grasslands and large forest openings; in summer, insect prey is taken by a variety of methods; nests in wildlife trees and nest boxes.
Townsend's Solitaire <i>Myadestes townsendi</i>	Alt; High in summer, Low in winter	Common summer, Uncommon winter	Forages in open coniferous forests for insects in summer, berries in winter; favourite berries are juniper and mountain-ash.
Veery <i>Catharus fuscescens</i>	Alt; Low	Common summer	Forages for insects in deciduous, riparian forests; eats berries in late summer.
Swainson's Thrush <i>Catharus ustulatus</i>	Alt; Low	Common summer	Forages and nests in a variety of coniferous and mixed woodlands.
Hermit Thrush <i>Catharus guttatus</i>	Alt; High	Common summer	Forages and nests in coniferous forests.
American Robin <i>Turdus migratorius</i>	Alt; Low and High	Common summer, Uncommon winter	Forages in open areas for insects and worms in summer; eats fruit and berries in the winter, especially mountain-ash; frequently builds nests in yard shrubs.
Varied Thrush <i>Ixoreus naevius</i>	Alt; Low and High	Common summer, Uncommon winter	Forages on the ground in dense, coniferous forests in summer, eats berries in winter; will feed on suet crumbs.

Catbirds and Towhees Accomplished songsters with long bills and tails.			
Gray Catbird <i>Dumetella carolinensis</i>	All; Low	Common summer	Forages and nests in dense shrubs and thickets; eats insects in spring and summer and berries in late summer.
Pipits and Wagtails Insect-eating birds that walk on the ground and constantly wag their tails.			
American Pipit <i>Anthus rubescens</i>	All; High	Common summer	Feeds and nests in alpine meadows; uses valley bottoms in migration.
Waxwings Crested, fruit-eating birds with an appetite for mountain-ash, Russian olive, and other berries.			
Bohemian Waxwing <i>Bombycilla garrulus</i>	All; Low	Common winter	Flocks descend on berry-producing trees in yards.
Cedar Waxwing <i>Bombycilla cedrorum</i>	All; Low	Common summer	Nests on the edges of mixed woodlands; small flocks feed on berries in late summer.
Shrikes Predatory birds that hunt for mice and small birds in open country with scattered shrubs.			
Northern Shrike <i>Lanius excubitor</i>	All; Low	Uncommon winter	May prey on small birds that are attracted to your bird feeder.
Starlings Our species is an unwanted introduction. Competes with desirable native species for cavities in wildlife trees.			
European Starling <i>Sturnus vulgaris</i> (Introduced from Europe)	All; Low	Common summer, Uncommon winter	Feeds in man-made habitats for ground-dwelling insects; also feeds on fruit and berries; careful choice of nest box hole size and suet type can discourage starlings.
Vireos Three species are found in the Southern Interior Mountains. Because they forage high in the tree canopy, they are difficult to see, but their pleasant, persistent songs indicate their presence in the local woodlot.			
Warbling Vireo <i>Vireo gilvus</i>	All; Low	Common summer	Nests and forages in a variety of woodlands; may nest in wooded yards.
Warblers Small, insectivorous, summer residents. Our regularly occurring 15 species use a variety of habitats for foraging and nesting. They can be attracted to your yard by maintaining native trees and shrubs and bird baths.			
Yellow Warbler <i>Dendroica petechia</i>	All; Low	Common summer	Nests and forages in willow thickets and suburban shrubbery, especially near water.
Yellow-rumped Warbler	All; Low to High	Common summer	Nests and forages in a variety of wooded habitats.

Table 5: Birds of the Southern Interior Mountains

Tanager			
Medium-sized songbirds, often brightly coloured. Most species live in the tropics, but one reaches British Columbia.			
Western Tanager			
Western Tanager <i>Prangia ludoviciana</i>	Alt; Low	Uncommon summer	Forages in coniferous and mixed wood forests for insects during the breeding season and berries in the late summer.
Grosbeak			
A group of colourful songbirds related to sparrows. Other species of grosbeaks are in the finch family.			
Black-headed Grosbeak <i>Pheucticus melanocephalus</i>	Restricted - mostly found in southern parts of the ecoprovince; Low	Uncommon summer	Forages in deciduous woodlands and thickets for insects, seeds and berries.
Lazuli Bunting <i>Passerina amoena</i>	Alt; Low	Uncommon summer	Feeds and nests in shrubby areas and deciduous woodlands.
Sparrow			
Small birds with cone-shaped bills that feed on insects in summer and seeds in winter. Many species can be attracted to your yard by sprinkling seeds and millet on the ground.			
Spotted Towhee <i>Pipilo maculatus</i>	Restricted - mostly found in southern parts of the ecoprovince; Low	Common summer Uncommon winter	Forages and nests in shrubby areas; a few will overwinter in yards with well-stocked feeders and dense shrubs for roosting.
Song Sparrow <i>Melospiza melodia</i>	Alt; Low	Common resident	Forages and nests on the ground; usually found in thickets adjacent to water; will come to feeders in winter.
Dark-eyed Junco <i>Junco hyemalis</i>	Alt; Low to High in summer, Low in winter	Common resident	Forages on the ground in forests and shrubby areas; readily attracted to yards with ground feed.
Black-bellied and Yellow-bellied			
A diverse group related to sparrows; most species feed on insects in summer and seeds in winter.			
Bobolink <i>Dolichonyx oryzivorus</i> (Blue List)	Restricted - mostly found in southern parts of the ecoprovince; Low	Uncommon summer	Found in damp hay meadows with abundant plant growth.
Red-winged Blackbird <i>Agelaius phoeniceus</i>	Alt; Low	Common summer, Uncommon winter	Nests in emergent wetland vegetation; in fall and winter, it frequents open country in mixed flocks with other blackbirds; occasionally visits feeders in winter.
Yellow-headed Blackbird <i>Xanthocephalus xanthocephalus</i>	Alt; Low	Common summer	Nests in colonies in emergent wetland vegetation; feeds in open range and croplands in winter.
Brewer's Blackbird <i>Euphagus cyanocephalus</i>	Alt; Low	Common summer	Typically nests in thick shrubs adjacent to rangelands and agricultural fields; feeds in open areas such as farmlands.
Brown-headed Cowbird <i>Molothrus ater</i>	Alt; Low	Common summer	Lays its eggs in the nests of several other bird species; the host birds raise its young, often at the expense of their own offspring; feeds in open country, often with livestock.
Bullock's Oriole <i>Icterus bullockii</i>	Restricted - mostly found in the southern parts of the ecoprovince; Low	Common summer	Feeds and nests in deciduous woodlands and hedgerows; they can be encouraged to build their hanging nests near your yard by providing string, yarn or horse hair.

FINCHES			
Hardy birds whose diet ranges from seeds, to fruit to insects. Most species are easily attracted to bird feeders. Finches will use feeders in summer as well. Numbers of several finch species fluctuate widely and they may not be present in all years.			
Pine Siskin <i>Carduelis pinus</i>	Alt; Low to High	Common resident	Planting favoured food sources -birch or alder - in your yard can attract large flocks; niger seed is another favourite but they rapidly consume this pricey food source.
American Goldfinch <i>Carduelis tristis</i>	Alt; Low	Common summer Uncommon winter	Provides some weed control by consuming seeds of thistles and dandelions; easily attracted to feeders, especially those with niger seed.
Red Crossbill <i>Loxia curvirostra</i>	Alt; Low to High	Common resident	Feeds in the tops of conifers by opening cones with their specialized bills; often comes to roadsides to drink and eat road salts.
White-winged Crossbill <i>Loxia leucoptera</i>	Alt; Low to High	Uncommon resident	Feeds in the tops of spruce and larch trees by opening cones with their specialized bills; often comes to roadsides to drink and eat road salts.
Pine Grosbeak <i>Pinicola enucleator</i>	Alt; Low to High	Uncommon resident	Mainly a bird of high elevation conifer forests but may visit feeders at lower elevations; they will trim away fruit of crabapples to get at seeds.
Common Redpoll <i>Carduelis flammea</i>	Alt; Low	Common winter	Numbers fluctuate from year to year; planting alder or birch will attract them to your yard.
Gray-crowned Rosy-Finch <i>Leucosticte tephrocotis</i>	Alt; High	Uncommon resident	Spends the summer in alpine meadows but may come to feeders or hay bale stacks in winter.
Cassin's Finch <i>Carpodacus cassinii</i>	Alt; Low	Uncommon resident	Can be attracted to feeders with sunflower seeds.
House Finch <i>Carpodacus mexicanus</i>	Alt; Low	Common resident	Readily comes to urban bird feeders; successfully competes with the non-native House Sparrow.
Evening Grosbeak <i>Coccothraustes vespertinus</i>	Alt; Low	Uncommon resident	In summer, spruce budworm specialists; easily attracted to feeders with sunflower seeds; large flocks can rapidly consume large quantities of seed.
House Sparrow			
OILY WORLD SPARROWS			
Passer domesticus (Introduced from Europe)	Alt; Low	Common resident	Only found in urban or other man-made habitats; successfully outcompetes native species; appropriate nest box designs will discourage nesting by this species.



Barn Swallows

JENNIFER WOODWARD

Table 6: Mammals

Most mammals are nocturnal and often the only evidence of their presence is tracks in snow or mud. However, diurnal species such as squirrels, marmots, deer, and bears are relatively easy to see. Since mice, skunks, raccoons, bears, and deer may play havoc with our woodsheds, gardens, and orchards, special care should be taken to live in harmony with such species. Terms used in the Distribution column are defined in Table 5.

Species	Distribution	Abundance	Habitat and Behaviour
SHREWS & MOLES: INSECTIVORA			
There are 5 species of shrews in the Southern Interior Mountains: Common Shrew (<i>Sorex cinereus</i>), Pygmy Shrew (<i>Sorex hoyi</i>), Dusky Shrew (<i>Sorex monticolus</i>), Water Shrew (<i>Sorex palustris</i>), and Vagrant Shrew (<i>Sorex vagrans</i>). They are among the smallest living mammals and have long, pointed snouts and beady eyes. Shrews eat large numbers of insects and other invertebrates in their short lives. They forage on the ground and den in rotten logs or small burrows in humus. To make your yard attractive to shrews leave areas of dense vegetation with a scattering of logs and leaf litter.			
BATS: CHIROPTERA			
There are 10 species of bats in the Southern Interior Mountains. Local bats feed almost entirely on nocturnal flying insects (e.g., moths and mosquitoes). During the day, most species roost in caves, tree cavities, buildings or the foliage of trees and shrubs. Bats also roost at night, using a variety of natural or man-made sites. Few bats spend the winter in B.C. See the Provincial Guide for instructions on how to build bat houses for your yard. Retaining large trees on your property creates roosting sites.			
California Myotis <i>Myotis californicus</i>	Restricted - so far, only found in southern half of the ecoprovince; Low	Common	Found in a wide variety of habitats from dry grasslands to wet montane forests; roosts in almost any type of natural or man-made shelter.
Western Long-eared Myotis <i>Myotis evotis</i>	All; Low	Uncommon	Uses a variety of habitats; forages on flying and ground-dwelling insects.
Little Brown Myotis <i>Myotis lucifugus</i>	All; Low and High	Common	Found in a wide range of habitats; can adjust hunting technique to take advantage of seasonally abundant insect prey.
Northern Long-eared Myotis <i>Myotis septentrionalis</i> (Red List)	Restricted - North Kootenay Mountains; Southern Continental Ranges; Low	Rare	Forages in old-growth western redcedar forests in Mount Revelstoke National Park; roost sites are unknown in B.C.
Long-legged Myotis <i>Myotis valans</i>	All; Low	Uncommon	Habitats include arid rangelands to montane forests; diet is mainly moths; relatively tolerant of cold temperatures.
Yuma Myotis <i>Myotis yumanensis</i>	Restricted - Selkirk Foothills; Southern Columbia Mountains; East Kootenay Trench; Low	Common	Prefers to feed over water.
Hoary Bat <i>Lasiurus cinereus</i>	All; Low	Uncommon	Found in a variety of forested and grassland habitats; roosts in trees; feeds on larger insects.

Table 6: Native Mammals of the Southern Interior Mountains

Name Common Scientific	Distribution	Abundance	Habitat and Requirements
Silver-haired Bat <i>Lasiorycteris noctivagans</i>	All; Low	Common	Uses forests and grasslands; roosts in trees and under loose bark; can exploit whatever insect prey is available.
Big Brown Bat <i>Eptesicus fuscus</i>	Restricted - East Kootenay Trench; Low	Common	Roosts in trees, buildings and rock crevices; forages in urban and rural environments over clearings, forests and water.
Townsend's Big-eared Bat <i>Plecotus townsendii</i> (Blue List)	Restricted - Southern Columbia Mountains; East Kootenay Trench; Low	Rare	Feeds mainly on moths.
RABBITS, HARES AND PIKAS LAGOMORPHA			
Two species are found in the Southern Interior Mountains. Both are common and provide prey for carnivorous mammals and birds.			
Common Pika <i>Ochotona princeps</i>	Restricted - Rocky and Columbia mountains; High	Common	Resides in talus slopes with nearby vegetation; feeds on forbs, grasses and tender parts of shrubs; diurnal.
Snowshoe Hare <i>Lepus americanus</i>	All; Low to High	Common	Nocturnal; rests in thickets and forests by day and forages in nearby open areas at night; eats grasses and forbs in summer and woody plants in winter.
RODENTS RODENTIA			
At least 25 kinds of rodents occur in the ecoprovince. Primarily vegetarians, many species serve as prey for our carnivorous wildlife.			
Least Chipmunk <i>Tamias minimus</i> (Red List)	Restricted - Purcell and Rocky Mountains; Low and High	Uncommon	Nests near or under ground in montane forests; depends on wildlife trees and fallen logs.
Yellow Pine Chipmunk <i>Tamias amoenus</i>	All; Low and High	Common	Found in open, dry pine/fir stands and alpine areas; excavates below ground burrows; eats a variety of seeds, fruit and fungi.
Red-tailed Chipmunk <i>Tamias ruficaudus</i> (Red List)	Restricted - Rocky Mountains and southern Kootenays	Uncommon	Lives in forests of all ages with shrub understorey; nests in burrows or under fallen logs.
Woodchuck <i>Marmota monax</i>	Restricted - Columbia Mountains; Low	Uncommon	Inhabits forests and edges at low and mid elevations; nests in self-excavated burrows that provide habitat for other species; eats herbs and shrubs; can be a garden pest.
Hoary Marmot <i>Marmota caligata</i>	Restricted - Columbia and Rocky Mountains; High	Common	Found in alpine tundra in loose colonies; nests in burrows; eats green plants; important prey item for Golden Eagles and bears.
Columbian Ground Squirrel <i>Spermophilus columbianus</i>	All; Low and High	Common	Lives in open country at all elevations; feeds on above and below ground parts of Herbaceous plants; may eat garden vegetables; food item for weasels, Bobcats, Red-tailed Hawks, and Badgers.
Golden-mantled Ground Squirrel <i>Spermophilus lateralis</i>	All; Low and High	Uncommon	Resides in mountain forests and alpine tundra; eats seeds, fungi and green plants; an important prey species.
Red Squirrel <i>Tamiasciurus hudsonicus</i>	All; Low and High	Common	Found in a variety of forest types; eats conifer seeds and fungi; our most carnivorous squirrel; nests in tree cavities, nest boxes and burrows; visits bird feeders.

 Table 6: Native Mammals of the Southern Interior Mountains

Common Name Scientific Name	Altitude Range	Abundance	Habitat and Distribution
Northern Flying Squirrel <i>Glaucomys sabrinus</i>	Alt; Low and High	Common	Found in coniferous forests; nocturnal; roosts and nests in old woodpecker cavities; eats seeds, leaves, and fungi.
Northern Pocket Gopher <i>Thomomys talpoides</i> (Red List)	Restricted - Southern Columbia Mountains; MacGillivray Range; East Kootenay Trench; Border Ranges; Low	Uncommon	Excavates earth from long underground burrows; earthen plugs placed at entrances; attracted to agricultural lands, pastures.
Beaver <i>Castor canadensis</i>	Alt; Low and High	Common	Found in wetlands and streams with deciduous food trees nearby; builds dams to access food and provide winter habitat; beaver ponds create habitat for many other species of wildlife.
Deer Mouse <i>Peromyscus maniculatus</i>	Alt; Low and High	Common	Found in a wide variety of habitats, including meadows, forests and human habitation; droppings may carry the potentially fatal Hantavirus.
Bushy-tailed Woodrat <i>Neotoma cinerea</i>	Alt; Low and High	Common	Uses a wide range of habitats, but prefers broken rock, mine shafts, gullies, cliffs and buildings; eats a variety of plant matter.
Southern Red-backed Vole <i>Clethrionomys gapperi</i>	Alt; Low and High	Common	Lives on the forest floor and in wildlife trees; also occurs above treeline, in mossy talus; eats leaves, seeds and berries.
Heather Vole <i>Phenacomys intermedius</i>	Alt; Low and High	Uncommon	Inhabits drier, open forests; caches leaves and kinnikinnick berries in stumps and hollows.
Meadow Vole <i>Microtus pennsylvanicus</i>	Alt; Low	Common	Uses a broad variety of heavily vegetated, low-elevation habitats, often associated with water; eats primarily grasses and sedges.
Water Vole <i>Microtus richardsoni</i>	Alt; High	Common	Resides on the banks of mountain streams at high elevations; an excellent swimmer.
Long-tailed Vole <i>Microtus longicaudus</i>	Alt; Low	Common	Prefers forest edge habitats; eats a wide variety of herbaceous plants, grasses, roots and bulbs.
Muskrat <i>Ondatra zibethicus</i>	Alt; Low	Common	Lives in marshes and lakes; constructs 'houses' of vegetation or burrows into banks; usually more active at night; diet consists of plant matter and smaller pond animals.
Western Jumping Mouse <i>Zapus princeps</i>	Alt; Low and High	Common	Hibernates in winter; prefers thick, shrubby habitats bordering native meadows and haylands.
Porcupine <i>Erethizon dorsatum</i>	Alt; Low and High	Common	Occupies a variety of forest types, and feeds on bark and green vegetation; uses small caves, rock piles and wildlife trees for dens.
Northern Bog Lemming <i>Synaptomys borealis</i>	Alt; High	Uncommon but occasionally erupts	Found in muskeg, wet alpine and subalpine meadows.

Carnivores			
There are 19 species of carnivores in the Southern Interior Mountains. Most species are exclusively predatory but species such as Black Bears and Raccoon will eat a variety of foods including plants and human garbage.			
Coyote <i>Canis latrans</i>	Alt; Low and High	Common	Found in a variety of habitats, but retreats from the high country in winter; eats mostly small mammals and carrion.
Wolf <i>Canis lupus</i>	Alt, but localized; Low and High	Uncommon	Hunts in packs for big game; generally avoids human disturbance.
Red Fox <i>Vulpes vulpes</i>	Alt; Low and High	Uncommon	Primarily nocturnal; uses forests with openings, agricultural land, and alpine tundra; omnivorous.
Black Bear <i>Ursus americanus</i>	Alt; Low and High	Common	Forages in nearly all native habitats but will seek apples in the fall; hibernates in natural crevices and wildlife trees.
Grizzly Bear <i>Ursus arctos</i> (Blue List)	Alt; Low and High	Locally common	Forages in open areas such as alpine tundra and avalanche paths; dens at high elevations in dry caves and wildlife trees; primarily eats herbaceous plants and berries but will scavenge carcasses and hunt.
Raccoon <i>Procyon lotor</i>	Restricted - extreme southwestern part of the ecoprovince; Low	Uncommon	Uses deciduous riparian forests, wetlands and urban/agricultural habitats; omnivorous diet includes small arthropods, birds, mammals, eggs and seeds.
Marten <i>Martes americana</i>	Alt; Low and High	Common	Lives and forages year-round in mature coniferous forest; hunts whatever small mammals are available; needs wildlife trees for shelter.
Fisher <i>Martes pennanti</i> (Blue List)	Restricted - northern parts of the ecoprovince; Low and High	Uncommon	Lives in mature, conifer-dominated forests; preys on Porcupines and Snowshoe Hares; often dens in wildlife trees.
Ermine <i>Mustela erminea</i>	Alt; Low and High	Common	Lives in a variety of habitats including young forest and shrublands; preys on rodents.
Long-tailed Weasel <i>Mustela frenata</i>	Alt; Low	Common	Habitat ranges from conifer forests to grasslands; feeds on a variety of small mammals.
Mink <i>Mustela vison</i>	Alt; Low	Uncommon	Found in wetlands and along slow-moving rivers; feeds on rodents, fish and amphibians found near water.
Wolverine <i>Gulo gulo</i> (Blue List)	Alt; High	Uncommon	Forages in coniferous forests in sparsely populated areas; dens in subalpine forests and avalanche debris; eats Hoary Marmots and carrion.
Badger <i>Taxidea taxus</i> (Red List)	Restricted - southern half of ecoprovince; Low	Uncommon	Lives and hunts in grasslands and open forests; ground squirrels and pocket gophers are typical prey items.
Striped Skunk <i>Mephitis mephitis</i>	Alt; Low	Uncommon	Found in open forest and agricultural habitats; their varied diet consists of insects, small mammals, berries and seeds.
River Otter <i>Lutra canadensis</i>	Alt; Low	Uncommon	Feeds mainly on fish and other aquatic wildlife; mostly nocturnal; rests in wildlife trees and dense vegetation.
Cougar <i>Felis concolor</i>	Alt; Low and High	Uncommon	Usually found in forested, rocky areas; preys mainly on big game; usually dens in caves.

Table 6: Native Mammals of the Southern Interior Mountains

Lynx <i>Lynx canadensis</i>	Alt; Low and High	Uncommon	Resides in mature forested habitats with an abundance of its chief prey item - Snowshoe Hare.
Bobcat <i>Lynx rufus</i>	Alt; Low	Uncommon	Forages in forested areas and farmlands; dens in wildlife trees or rock crevices; eats primarily small game animals.
Rocky Mountain Elk <i>Cervus elaphus nelsoni</i>	Alt; Low and High	Locally common	Prefers open meadows, avalanche paths and grasslands for foraging; primarily eats herbaceous plants but woody browse is also used.
Mule Deer <i>Odocoileus hemionus</i>	Alt; Low and High	Common	Uses a variety of habitats including grasslands and montane forests; diet depends on forage availability and season; uses grasses, forbs, and woody browse.
White-tailed Deer <i>Odocoileus virginianus</i>	Restricted - occurs mainly in southern parts of the ecoprovince; Low	Common	Uses a variety of habitats including agricultural and riparian areas, grasslands and montane forests; a variety of vegetation is eaten, depending on availability and season.
Moose <i>Alces alces</i>	Alt; Low and High	Common	Feeds on wetland vegetation in summer and shrubby browse in winter; valley bottoms and avalanche paths are favoured in winter.
Mountain Goat <i>Oreamnos americanus</i>	Alt; High	Common	Lives on rocky cliffs; feeds on a variety of plant matter; wind-blown, slopes are favoured in winter.
Bighorn Sheep <i>Ovis canadensis</i> (Blue List)	Restricted - Rocky Mountains; Introduced in the West Kootenay; Low and High	Common	Inhabit grasslands and open forests near steep slopes for security; feeds on a variety of plant matter; avoids deep snow in winter.
Mountain Caribou <i>Rangifer tarandus</i> (Blue List)	Restricted - Columbia Mountains; High	Locally common	Summer diet consists of forbs, grasses, and shrubs; lichens growing on old-growth Engelmann spruce and subalpine fir are their primary winter food.



Northern Flying Squirrel
JENNIFER WOODWARD



